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THE DRUIDS.

"Hear ye this, O house of Jacob, which are called by the name of Israel * * * which swear by the name of the Lord, and make mention of the God of Israel, but not in truth nor in righteousness. For they call themselves of the Holy City, and stay themselves upon the God of Israel. The Lord of hosts is his name," Isa. xlviii., 1, 2.

In the May number of our Magazine, page 88, the statement is made, in regard to the builders of these gigantic temples of which the ruins abound in Great Britain, that they were erected through the influence of a powerful and learned priesthood known as *Druidical*. It was also shown that there is strong evidence, that the temples combined an astronomical design with the requirements of worship. This fact points to an eastern origin for this priesthood, where devotees still bow to the Sun and dance in imitation of planetary movements. But the *Druidical* was a strangely mixed religion, it combined Sabianism with Jehovah worship, and added to both, the impure ceremonies of faith in Baal and Moloch. Its varied rites paralleled those of many oriental nations. With them it combined both mercies and cruelties. It roused both hope and fear. It was a mixture of the Divine and human, that could only have been a *growth*. It

was the conglomerated religion of "wanderers." Phœnicians, Palestinian Jews, Chaldeans, Persians, and later Greeks and Romans could each have found some point of union with these sturdy priests who symbolized their power by their gigantic temples. These Druids were priests not only of the Cymry and Gaels but of the Celts, of whom in fact the Cymry and Gaels were a part. Herodotus unites *Celtae* and *Cynetae*, (Cymry, according to Higgins), and Diodorus Siculus unites *Celtae* and *Gaels*. Under different names this priesthood appears, but these names can be traced to the same root. In "Celtic Antiquities," page 3, by John Smith, we read that "the religion of the Druids is allowed to be of the same antiquity with that of the Magi of Persia, Brahmans of India, and Chaldees of Babylon and Africa." Higgins, in his 'Celtic Druids,' says that Virgil was a Druid, and the Druids were Pythagoreans, holding the doctrine of the harmony of the spheres, as did the Pythagoreans, and that the word Pythagoras in Welsh means *explication of the universe*.

In tracing the derivation of the word Druid, we are taken to all nations and to all tongues, indicating either the wandering of these priests, or their common origin. John Smith tells us that the Celtic name for natural philosophers or magicians is still *Druidh*, meaning literally, *wise men*. One derivation is said to be from a Celtic word *Derw*, an oak. "Magic," Higgins says, "was little more than the knowledge of astronomy," and that some derive the word *Druid* from the Hebrew, *derussim*, *drussim*, or *drissim*, meaning *people of contemplation*. The Welsh word, *Drud* or *Druid*, according to Vallency, means an absolver or remitter of sins. The Irish *Druí* or *Druid* is from the Persic *duru*, a *holy man*. Ousely derives both from the Arabic *Deri*, a wise man. Persic, *Daru*, English, *Druid*. (Examine Higgins' Celtic Druids, page 94). Another derivation from Abbè Pierre de Chiniac, gives the Celtic compound *Di*, *God*, and *rouyd*, *speaking*. A writer in the Standard of Israel tells us that the priests of the Cymry were first called *Gwddon*, meaning *wise men*, and this combined with *deru*-oak forms *Der Wyddon*, *oak wise men*. Davies gives a derivation of Taliesen's, the Welsh bard, who says it is composed of the Celtic words *Dar*, *Gwydd*, *superior*

(or high) *priest*. After examination of all these and their comparison with the most striking peculiarities 'of the Druidical worship, which really were the imitative processions of planetary movements I would choose a derivation from the Hebrew *Dur*, *to go round*. This would suggest a religion beginning before the Phoenicians taught their idolatry to Israel, and which is still found among the *Shakers* of our own land. A religion "scattered" as was the house of Israel, sifted "among all nations, like as corn is sifted in a sieve," (Amos 9, 9).

Perhaps if this derivation is objected to, a combination will bring us nearer to the meaning of the name, and we will consider the Druids as *priestly wise men*, astronomers, *men of contemplation, enchanters*, claiming *inspiration* (or those to whom *God spake*) imitators of heavenly movements, worshippers in groves, reverencing trees, and so gain a very comprehensive idea of the offices of Arch-Druid, Druid, Prophet and Bard.

The Druids say of themselves, that they were descended from the god Dis, a word easily derived from Dies. The elementary words expressed, light, water and deity. The servile letters were added by different nations, but the original meanings preserved as Dydd, Dies and Deus, God and day. The self existence of the Deity is found in these words. "The verb, *to be*, Eheyeh, as in the Hebrew of the first verse of Genesis, with its many prefixes and terminations is perhaps the most widely diffused. It is frequently to be found in the names of the Supreme Being, as in the Greek Theos and the Mexican Teotl, *He who is* the Eternal, transmitting the divine truth recognized by the elevated intellect of Plato, that God alone *is*; a sublime revelation made a thousand years before by the voice of God himself." *The Jehovah* who was, and is, and is to come. "The word contains in itself the distinguishing letters by which the three tenses of the word 'to be' are denoted," Mazzaroth, page 76. In a note appended to this is a quotation from Socrates, who says that the words Zeus, and also Dis, meaning "living and giving life," were the offspring of some great intellect.

From this god Dis, the Jehovah, the Druids say they were descended. Israel's claim is the same: "I am a father to

Israel, and Ephraim is my first-born, saith the Lord." Jeremiah, xxxi, 9.

These god-descended Druids, I propose to show, held, as priests of the Cymry, a corrupted faith like to that of the idolatrous priests of Israel. It is not necessary to repeat all that has already appeared several times in the publications of the Anglo-Israel Society, the likeness to the Jehovah-worship of Israel, the three-fold priesthood, &c., &c., but to prove that such worship as the Druids performed was exactly such as the prophets preached against, and such as Jehovah reprov'd and punished His people for ; and that which is distinctly stated as the reason of their long disinheritance. This idolatry is identical with that form of legalized idolatry condemned by the prophets as the "Sin of Samaria." Why this name is given to it will appear in a future article ; it is only necessary now to give the derivation of Cymry that we may the more clearly connect the Druids with them. The Welsh pronunciation of Cymry is "Khumri," and some of our writers have given its derivation from Shemer, Shomeron or Samaria, which is said to be called Khumri in the Assyrian inscriptions, and also from the name of Omri, the eighth king of Israel. That it cannot be derived from both is proved by the different meanings of the two words, which would necessarily have some likeness if derived from the same root. Samaria (Shomeron) in 1st Kings, xvi, 24, is said to have been so named by Omri, its builder, from Shemer, of whom he bought the land. Shomeron means watch-post or watch-mountain, while Omri means God-taught, or a servant of Jehovah. On examination it is found that it is Omri who is called Khumri in the inscriptions, and that when Samaria is spoken of, it is as *Beth Khumri*, or the house of Omri ; and his territory as Bit Humri, the land of Omri. From Omri, then, the founder of the third dynasty of Israel, we get the word Cymry, and during his reign and that of his immediate successors we must look for the rise of the priesthood known as Chemarim—dark, mourning, ascetic priests—who for some unexplained reason have come down to us as Druids. The proofs of this we will consider later and at present examine the Druidical idolatry under the head of

THE SIN OF SAMARIA.

One division of this "Sin" was the making of "standing images." This expression is remarkably descriptive of some of the Druidical remains. If they are accepted as astronomical as well as religious, they are emphatically "standing images" of the heavenly bodies. They are not "standing images" in the sense of idols, but they are representations of the host of heaven, and intended to be imperishable records of their marvellous changes, cycles, transits, movements, &c. They are not "molten images" nor "graven images," but simply in the plain words of Scripture "standing images." In Isaiah, xvii, 8, xxvii, 9, and in Ezekiel vi, 4, we have *sun images* (margin); perhaps the obelisks, said to represent the rays of the sun, may come under that head, but the prophets Hosea and Micah, who particularly warned Israel before the dispersion, speak only of "standing images," they are to be spoiled and cut off, with witchcrafts and sooth-sayings, for their sin consisted in the misuse of their knowledge and in the magical arts and dark mysteries with which they shrouded their wisdom.

These people did not hesitate to "swear by the name of the Lord," but they held it too sacred to be spoken in words; they expressed it by a triple bardic sign. Such was the symbol of Jehovah among the Jews; three Yods and one sacred Tau inscribed in a circle forming what they called the Tetragrammaton. The Yod is the first letter of the word Jehovah and the tenth (the perfect number) of the Hebrew alphabet. It is said to mean *hand*, and in both Phœnician and Samaritan alphabets the letter is a sort of likeness of a hand. The hand of God represents His creative and miracle working power, and the Celtic name for miracle is Mior-Bheil, the finger of God.

Of the circle and the Yods it is said, "The Jews drew three Yods with the point Kamets (Tau) underneath. The three Yods were so drawn as to mark the three hypostases in the Divine nature. Equal in magnitude and similar in form they denoted the co-equality of these persons. By the single Kamets placed underneath they meant to symbolize the unity of the essence common to each person." ('Buxtorf Dissertations,' p. 260). The literal meaning of Tau or Thau is a boundary or limit,

which meaning has equal significance with that of unity. It answers to the *Omega* of the Greeks, and equally suggests a boundary or ending. Higgins says that the number of the letters of the ancient Celtic Irish alphabet was seventeen. Of these, sixteen were the identical letters said to have been brought from Phœnicia by Cadmus. Originally the common letters of the Greeks did not exceed seventeen. He claims that the system of letters of the Samaritans, the Hebrews, the Greeks and the Irish Celts must have been originally the same. If so we must find that the *Yod-ha* or *Yew* of the Irish Celtic alphabet will answer to the Hebrew *Yod* and the Greek *Iota*. The triple Bardic sign of the Druids was formed of three converging straight lines, not quite meeting at the top. On examining this sign I find it composed of the Celtic *Yodha* (our *I*) three times repeated. This being the same as the Hebrew *Yod* and the Greek *Iota*. The Tetragrammaton contains the *Yod* three times repeated. The Bardic sign is the *Yodha* three times repeated. In each we have a threefold expression of the Divine existence, in each a trinity in unity. Three persons in one God. In a manuscript found among the treasures of Raglan castle, the Druidical sign is said to be the vocalization of the name of God as melodiously sounded at the creation. Higgins suggests that the name *Yew* was given to the tree from its supposed almost eternity of life. The study of this letter in all languages is deeply interesting, but this part of it is only introduced here to show the near relation of Druidical and Israelitish priesthoods. The Druids gave their instructions verbally, or wrote them upon leaves of certain trees (hence *leaves of a book*) which accounts for only traditional preservation of their wisdom. Their reverence for trees, and, perhaps, their worship of them is one of the extensive branches of the subject, (the use of "branches" suggests their mode of writing.) Stuekeley says: "The learned Schedins says they seek studiously for an oak tree, large and handsome, growing with two powerful arms in the shape of a cross, if they are not perfect they fasten a cross beam and consecrate it thus: On the right hand they cut in the bark, *Hesus*; on the middle stem *Taranis*; on the left arm, *Belenus*; on the top, *Thau*, the name of God.

Hesus in Celtic means the Supreme God, like Esar, comes from the Hebrew, 'Lord' (Scandinavian *Æsar*; Egyptian Osar and Osiris, the prince; Sirius, the prince). "Belenus is the Baal of Scripture, and, if traced to the original, meaning God the Son. Taranis means spirit, or lord of the air." We here find again the triad with the sacred Tau, and are reminded that they "swear by the name of the Lord, and make mention of the God of Israel." Its connection with the oak reminds me that both oaks and Druids are sometimes spoken of as Saronides.

In giving the tenets of the Druidical faith it may be necessary to repeat what may be familiar to many of our readers. I must, however, call attention to certain facts considered in their connection with the commands and warnings to idolatrous Israel.

They adored one Supreme Being, but deified not only His attributes, but His creation, in which they taught His spirit was infused. Meilyr, a distinguished bard, in [an elegy, says: "I will address myself to my Sovereign, the King of the air." Now read the words of the Lord through His prophet Amos, given 775 B. C., sixty-six years before the dispersion. In chapter fourth the Lord addresses those who are "in the mountains of Samaria, which oppress the poor and crush the needy." After a repetition of many warnings, He says (verse 12): "Therefore, thus will I do unto thee, O Israel: because I will do this unto thee, prepare to meet thy God, O Israel. For lo, He that formeth the mountains and createth the wind (margin, spirit) and declareth unto man what is His thought, that maketh the morning darkness, and treadeth upon the high places of the earth, the Lord, the God of hosts is His name."

They believed in the immortality of the soul, and future rewards and punishments, but they taught the truth with fearful mysteries, and sent the trembling soul through a series of metempsychoses. Mercury, whose name means "who cometh," presided over transmigrations, and was called by the Druids, God of our fathers, *Duru si Taddai*. Funeral rites were connected with this worship, combined with astronomical references. The Moon was his coffin, a grotto his sepulchre, he

visited Hades and then rose from the dead. The oak was important in this, as they called it the tree of immortality. "Ye shall be as an oak whose leaf *fadeth*," said the prophet Isaiah (i., 30).

In their idolatry, as in all others, there is a foundation of truth, so in the mysteries—in which was included the weeping for Tammuz—the deepest truths were represented, or misrepresented, so that they seem the hideous distortions of a nightmare. In Ezekiel 8th, a vision is recorded of this particular form of the sin of Israel, when (verse 14) he saw the women "weeping for Tammuz." Tammuz is said to be Adonis, or the Sun, and in the fable of his spending six months with Venus, and six with Proserpine, we see the alternate return of summer and winter, the feast beginning in sorrow and ending in joy. With its celebration the lowest rites were connected. In some extraordinary way representations of death and the future state were combined in these celebrations, the educated priesthood bringing all the appliances of science to depict these conditions. They bear so great a resemblance to the well-known Eleusinian mysteries that it is unnecessary to describe them. In the chapter in Ezekiel referred to, the particulars are given with the accuracy of inspiration, even the initiatory "hole" and "door," "the abominable beasts" and "men worshipping the Sun" are detailed.

But this subject of the mysteries is too extensive for the limits of this article, I will leave them with one more reference to Isaiah, whom Faber thinks accurately describes the rites of initiation into them, one part of which represented the wanderings of the soul after death. The prophet, in chapter 57, describes the vain worshippers and their funeral rites, their visiting Moloch with propitiation, their messengers (like Bacchanals and Menades), their descent into hell, and finding of life from their sovereign. Faber gives the following translation of the passage in Isaiah lvii., 9-10: "Also thou didst visit Moloch with ointment, and didst multiply thy perfumes, and thou sentest out thy messengers to a distance, and thou didst bring thyself down to Hades; with the multitude of thy progresses thou didst weary thyself, and yet thou saidest not, the matter is des-

perate. Thou hast round the life of thy supreme power, therefore thou art no longer grieved."

Dr. Borlase mentions a Druid monument in Scilly and Cornwall, called "hole of stone"—a large orbicular stone supported by two others, through which those passed who acquired holiness. In all the celebrations of the mysteries, a hole or a gate was necessary. It was always a small hole or a "strait gate," for in the lesser mysteries the soul's struggle was taught; as in the greater, the reward was graphically represented.

They worshipped in groves, and offered sacrifices to a pure God of the most impure of his creatures. The cat and the sow were among their sacred animals. They make Ceres assume the character of Hioch—a sow. She calls her child Porchella—a little pig; her congregation, swine; her chief priest, Turch, a boar, her heirarch, Meichiad, a swine herd. There is a triad of these mighty swine herds, which Davies says "seems to allude to the incorporation of the primitive religion of the Britons with the rites of the sacred sow of the Phœnicians."

"I said, behold Me, behold Me, unto a nation that was not called by My name. . . . A people that provoketh Me to anger; . . . that sacrificeth in gardens; . . . which remain among the graves; . . . which eat swine's flesh, and broth of abominable things is in their vessels."—Isaiah lxx., 1-4. A receipt for which broth we may find in the witches' cauldron:

"Thrice the brinded cat hath mewed—
Thrice—and once the hedge pig whined.
Round about the caldron go,
In the poisoned entrails throw—
Toad, that under coldest stone
Days and nights hast thirty-one;
Sweltered venom, sleeping got,
Boil them first—the charmed pot!

.
Fillet of a finny snake
In the caldron boil and bake;
Eye of newt and toe of frog,
Wool of bat and tongue of dog,
Adder's fork and blind-worm's sting,
Lizard's leg and owl's wing,
Scale of dragon, tooth of wolf.

.



Cool it with a baboon's blood—
Then the charm is firm and good."

—*Macbeth.*

In Ireland one of the ancient incantations was: "I call thee from the East, West, North and South; from the groves, the woods, the rivers, the fens; from the fairies—red, black and white," etc.

Faber states that the formula used by the officiating hierophant in the mysteries, was identically the same as in Isaiah lxv., 5: "Which say, stand by thyself, come not near unto me; for I am holier than thou." The condemnation soon follows. "They that sanctify themselves and purify themselves in the gardens, behind one tree in the midst, eating swine's flesh and the abomination and the mouse, shall be consumed together, saith the Lord."—lxvi., 17. "One of the ceremonies of the Celtic highlanders is for a person who wished an answer from the oracle, to kill a bullock and sleep in his skin. This must be done in some wild situation, and the reply of the demon waited for."

To which the Lord says: "When they shall say unto you, seek unto them that have familiar spirits, and unto wizards that peep and that mutter: should not a people seek unto their god?" Isa. viii. 19.

The Druids stated their object to be, "to reform morals, to secure peace and to encourage goodness," yet they descended to every form of magic arts, and of vileness and impurity. "Thus saith the Lord concerning the prophets that make my people err, that bite with their teeth and cry, Peace. * * * Therefore night shall be unto you, that ye shall not have a vision; it shall be dark unto you, that ye shall not divine. * * * Then shall the seers be ashamed, and the diviners confounded; * * * for there is no answer of God," Micah. iii. 5-7.. (thirty years before the dispersion.)

Cæsar says, "They assumed to discourse of the hidden things of nature, of the earth and of the forms and movements of the stars"—but this wisdom turns to folly when he adds—"and of the power and rule of the gods." Esus, the Celtic Mars, was their god of battles, mentioned in Daniel, xi. 38, as the god of forces; Taranis-Jupiter was the sovereign of

the aerial expanse; the Assyrians called him Belu, the Phœnicians, Baal Ram, god of thunder, Taran-thunder, hence the Welsh word taran, thunder, and the deity Taranis. The altars of Taranis were called Cromlechan, by them stands a prodigious stone or pedestal to the idol; human sacrifices were offered to Taranis. The Britons worshipped the Sun under the form of erect conical pyramidal stones, which were symbols of the solar rays. (Isaiah xvii., 8. Sun images, see marginal translation.) These altars were called Meini in ancient British. The Phœnicians named the Sun Baal, Sameen—lord of the heavens. On the mainland of Orkney, near the island of Pomona, is an erect stone with Belus on it. The stones placed for worship are usually ascribed to the Celts; the ancients distinguished these stones erected with religious views as amber stones, signifying sacred. Congain, or vast mounds of earth or heaps of stones, called in the primitive language Carnen, were sacred to Apollo, and are all over Britain. One fire was kindled on the carn, and the other on the ground, between them those to be sacrificed passed, hence the proverb "between two fires." For authority on this see essay on mythology of ancient Britons in the 'Transactions of the Cymmrodorion.' Sixty years before the dispersion these words were spoken: "When I would have healed Israel, then the iniquity of Ephraim was discovered, and the wickedness of Samaria," Hosea vii. 1. "They went to Baal-peor, and separated themselves unto that shame," ix. 10. "My God will cast them away, * * * and they shall be wanderers among the nations," ix. 17. "Israel * * * hath increased the altars; * * * they have made them goodly (standing) images," x. 1. "They sacrificed to Baalim, and burned incense to graven images," xi. 2.

They worshipped in temples open at the top, because God could not be confined in a building made by man; but the smoke of human sacrifices ascended, and the Lord dwelt not in a temple desecrated and unholy: "For when they had slain their children to their idols, then they came the same day into my sanctuary to profane it. * * * And ye shall bear the sins of your idols, and ye shall know that I am the Lord."—Ezekiel, xxiii. 39-49.

They worshiped Apollo as the god of medicine, and possessed considerable knowledge of the healing powers of plants; but it was filled with superstition. They attributed sacred characters to herbs and trees. The mistletoe (apparently a symbol of the great healer) and the marshwort were sacred. The hedge hyssop and the vervain were said to have magical qualities. "Root of hemlock digged in the dark" (its juice was used for the purification of the priests) and "slips of yew slivered in the moon's eclipse," had mysterious power. When a mistletoe entwined an oak there was a feast of rejoicing, and the leaves of the tree were scattered to heal diseases.

There is no condemnation for the use of plants for the relief of suffering; Isaiah ordered figs for Hezekiah's malady, and the leaves of the tree of life are to form an all-healing cure for the sin sickness of the nations, but the mixture of idolatry with this is especially reprov'd in the case of Ahaziah, who sent to Baal-zebub, the god of Ekron, to ask if he should recover from his disease. "Is it because there is not a god in Israel, that ye go to inquire of Baal-zebub, the god of Ekron? Now, therefore, thus saith the Lord, * * * thou shalt surely die," was the message of the prophet to the king of Samaria. The meaning usually given to Baal-zebub is "god of flies." Higgins, however, denies this; he was certainly some form of the universal Baal, and from Ahaziah's action seems to have been endowed with some healing power.

The serpent's egg was a talisman, and there is reason to believe that serpents were worshiped. This idolatry is generally to be found in connection with tree worship. The serpent and the tree were very near in Eden, and are united in most of the Oriental idolatries. Hezekiah was obliged to destroy the Brazen Serpent, because it had become an object of worship, instead of only a sacred relic. Some excuse for serpent worship is given by those who make this creature a god of wisdom; the Druids, perhaps, considered themselves justified by placing the serpent in the heavens as the ecliptic, which it represents, but are condemned by Him who says of the doctrine of the Nicolaitanes (which was serpent worship): "So hast thou also them that hold the doctrine of the Nicolaitanes, which thing I hate."

Fergusson denies that the Druids worshiped the serpent, yet he finds evidence of this low idolatry among the Picts of Scotland. He says: "We shall probably not err far, if we regard these traces of serpent worship as indicating the presence in the northeast of Scotland of the head of that column of migration, which, under the mythe of Wodenism, we endeavor to trace from the Caucasus to Scandanavia. The Edda seems sufficient to prove that a form of serpent worship did certainly prevail in the latter country, in the early centuries of the Christian era, and nothing seems more in accordance with Pictish traditions, than that it should have passed thence into Scotland and left its traces everywhere between the Orkneys and the Firths. The traces of it that may exist in England or Ireland, probably belong to an earlier pre-historic people and may have been introduced by another and more southern route" (*Tree and Serpent Worship*, by John Fergusson, p. 32).

There seems no mention of serpent worship in the Bible till after the Brazen Serpent, the history of which accounts for the reptile being counted the god of health. His claims to wisdom come from the ability he showed in offering to the woman the knowledge of the gods, instead of any worldly bait! It is possible that the reverence for the serpent found among the Druids, may have been chiefly connected with the worship of Saturn, or of Hercules. There were two serpent emblems: those connected with time, having narrow pointed heads (harmless), while the serpent enemy (poisonous), has a broad head. This distinction is found in most ophite worship. The ecliptic is represented as the serpent with the pointed head. One of their deities was Ovana, the goddess of the ocean, and she is represented in Tours (France) with wings above her head, two large scales near her ears, and her head encompassed by two serpents, with their tails hidden behind the wings. There are many curious representations of serpents entwined about certain figures among the records of the Celts of France, but it is impossible to consider further this branch of the subject. Serpent reverence, if not worship, cannot be safely denied of the British Druids.

E. BEDELL BENJAMIN.

STUDY OF TEXTS—GEOGRAPHY OF MOSES.

Goshen—Rameses. We meet these two names in Genesis. According to some writers one is Hebrew, the other Egyptian. Others say both are Egyptian. They designate the country granted by the Pharaoh of Joseph to Jacob and his children.

"Dixit Itaque rex ad Joseph; pater tuus et fratres tui venerunt ad te: in optimo loco fac eos habitare, et trade eis terram Gessen.

Joseph vero patri et fratribus suis dedit possessionem in Egypto, in optimo loco terrae, Rameses, ut praeceperat Pharaon: habitavit ergo Israel in Egypto, id est terra Gessen, et possedit eam." (Gen. xlvii., 5-27.)

We also find them used in the same sense in Exodus and in Numbers:

"Tantum in terra Gessen, ubi erant filii Israel.—Profectique Israel de Ramesse. (Ex. ix., 26.—xii., 37.) Profecti igitur de Ramesse." (Numbers xxxiii., 3.) But Rameses is also the name of one of the two cities that were built by the Hebrews for a Pharaoh who oppressed them: *"Edificaveruntque urbes tabernaculorum Pharaoni, Pithom et Rameses."* (Ex. I., 11.)

And this identity of name has caused a confusion more or less voluntary among the commentators, who, at the time of the exodus, give the place of departure as the city, and not the land, of Rameses.

Moses describes in detail the scene of the departure, and shows us the Hebrews slaughtering the lamb, marking with the blood the lintels and door-posts of the houses they occupied, either as proprietors or as tenants (*Postulabit mulier a vicina sua, et ab hospite sua* (Ex. iii., 22), where they carefully shut themselves in through the night to eat the feast of the passover. (Ex. xii. and xiii.) In the morning, being importuned by the Egyptians, they departed in great haste, bearing on their shoulders the unleavened dough which they had not taken time to bake. Where were the great mass of these homes situated?

Evidently in the *land* of Rameses, and not in the city, which could have accommodated only a small number of them. Now the first stopping place was Succoth, the second Etham (Numbers xxxiii., 5-6), hence it is evident that the city of Rameses is not named in the account of the exodus. Moreover, the confusion possible to the rigour of the Vulgate, and even with the Hebrew text, is not possible with the Septuagint, which says explicitly "*The land of Rameses.*" The name of Rameses belonged to many of the Pharaohs, and undoubtedly attached to the oppressor who built the two cities; he gave his name to one of them, probably to the most important, as well as to the country at large; and if Moses employed it in Genesis, it is because at the time when he wrote—that is to say, after the exodus—the two names, Rameses and Goshen, were equally in use.

David teaches us that Goshen belonged to Tanis, or Zoan.

"*Fecit mirabilia in terra Egypti, in campo Taneos. Prodigia sua in campo Taneos.* Ps. lxxviii., 12-13, whence it follows that that city was the capital of the Pharaoh of Josephs' time; for the latter, in installing his father, said, "*Habitabis in terra Gessen; erisque juxta me.* Gen. xlvii., 10."

Jacob, arriving in Egypt with his wives, children, grandchildren, servants, flocks, herds, and all his goods, *waited in the land of Goshen*, and sent Judah to inform Joseph of his arrival. (Gen. xlv., 28). Evidently he could not cross the Pelusiatic branch of the Nile with his whole people, without the consent of Pharaoh, neither did he desire to do so. It is there, then, that the land of Goshen is situated. One of the reasons why Joseph had placed his father in this land was the hatred the Egyptians felt toward shepherds, "*quia detestantur Egyptii omnes pastores ovium.*" There were then no Egyptians in the land of Goshen, consequently, it was not, properly speaking, in Egypt; this explains why it says in Genesis: "*Habitavit ergo Israel in Egypto, id est in terra Gessen,*"—Israel dwelt in Egypt,—that is in the land of Goshen. Really the ancient limitation of Egypt was the river Nile, which separated it from Arabia; thus the Septuagint says: *Goshen in Arabia*. This circumstance explains very clearly the facility with which the Israelites were installed in their new homes. Really, the country not being protected

by the Nile against the invasion of robbers, could not have permanent homes, and was only suitable for nomadic tribes. Therefore the small tribe of Jacob, composed of not more than four or five hundred persons, and several thousand head of cattle, had only to erect their tents, with the permission of Pharaoh, in some unoccupied district; and to send their flocks to graze in the green pastures of the Nile, to find themselves regularly established there.

In this goodly land—"optimo loco,"—Israel multiplied with rapidity, and soon replenished it. "*Habitavit ergo Israel in terra Gessen et possedit eam.....ac roborati nimis impleverunt terram.*" (Gen. xlvii., 27)." At the time of the exodus they numbered 600,000 men capable of bearing arm; these, with the women and children, would constitute a population of nearly two millions. Now if we consider the fertility of the soil, the tranquility enjoyed by the children of Israel, and the longevity of the men of those times, this multiplication is not excessive. At the least we count two hundred and fifteen years from Jacob to the exodus. Now if we estimate the number of those who came with him to Egypt, at four hundred, and annual increase of four per cent. will be sufficient to attain the number of two millions; and of four and a half per cent. if we consider only his seventy direct descendants and their wives, in all one hundred and forty persons. If we count four hundred and thirty years, according to the Vulgate, (Gen. xii.,), the per cent. will be very much smaller. But this was not all the population of Goshen; there were also many Egyptians; the rich of whom the Hebrews demanded gold and rich clothing, to hasten their departure, and the poor, of whom a multitude went with them, (Ex. xii., 38); altogether, we should be able to estimate the inhabitants of Goshen at that time, to number about three millions. To arrive at this result, they must have utilized all of the cultivable land on the right bank of the Pelusiac; for the country did not extend upon the left bank, since at the exodus the Hebrews were not obliged to cross the Nile. The pastoral life had been abandoned, and the children of Israel had become agriculturists. Without doubt we may attribute to them the digging of the canals derived from the Pelusiac, which irrigate the land. You must observe that

really in Egypt, where there is no water except that furnished by the Nile, that it is the soul source of fertility. Wherever the canals conduct it, the soil is cultivable; but the desert commences where irrigation ceases.

The land of Goshen then extended along the Pelusiac branch, from the Mediterranean on the north to the Memphian desert at the south, where the elevation of the land rendered further irrigation possible; and it extended more or less into the desert of Palestine, according to the length and development of the canals.

The cities of Rameses and Pithom. Rameses and Pithom are two cities built by the Hebrews for Pharaoh the oppressor. The Vulgate calls them "*urbes tabernaculorum*,"—cities of store-houses; other version call them cities of forts, cities of treasure. This would make it appear that they were designed to command the country, and that they had forts, garrisons, and warehouses for storage of food in sorts. For this purpose they would best be placed upon the water courses of the frontiers, and at opposite extremities of the land, the better to serve their purpose; Rameses, the principle one, since it bore the king's name, and Pithom centrally situated upon some important canal. The Egyptian cities, situated upon the Pelusiac, keeping to the west, and the Hebrew cities bounded on the east by the desert.

Succoth, Etham. These are the first two stopping places of the journey.

"*Profecti igitur de Ramesse . . . castrametati sunt in Succoth, et de Succoth venerunt in Etham quae est in extremis finibus solitudinis.*" (Numbers xxxiii., 5-6.)

It was at Succoth that they cooked the dough that they had borne upon their shoulders (Ex. xii., 39); they found there, then, both fuel and water, as well as at Etham, since they lacked neither until, after the passage of the Red Sea. (Ex. xv., 22.) Besides, as Etham was situated at the border of the desert, that is to say, at the extreme limit of cultivation it is certain that water was plenty up to that point precisely, but no further, since there commenced the desert. The canal that brought it there was evidently the one the Hebrews had encountered in the olden time at Succoth, and which they had not been able to cross on

their arrival in the land of Goshen, because of their large flocks and herds and the train of baggage that accompanied them.

The choice of Succoth as a point of rendezvous indicates that the place had among the Hebrews a certain notoriety, whether because of the abundance of wood and water, or from some other cause. It is clear that Moses, to avoid error, was obliged to name some point well known. This proves conclusively that the opinion of those who, because of the encampment, derive the name from the Hebrew Succoth, *tents*, cannot meet with approval, as it, in a manner, constitutes a begging of the question; for the place must have borne a name before the publication of the order which convoked the people there.

Now let us study the march of the Israelites. When God, on Mount Horeb, commanded Moses to present himself before Pharaoh, he said to him: "*Sed ego scio quod non dimittet vos rex Egypti, ut eatis, nisi per manum validam. Extendam enim manum meam et percutiam Egyptum in cunctis mirabilibus meis, quae facturus sum in medio eorum; post haec demitet vos.*" (Ex. iii., 19-20), "And I am sure that the king of Egypt will not let you go, unless he be compelled by a powerful hand. And I will stretch out my hand and smite Egypt with all my wonders which I will do in the midst thereof; and after that he will let you go."

Moses tells us: "*Perfecti sunt filii Israel in manu excelsa; videntibus cunctus Egyptiis, et sepelientibus promogenitos, quos percusserrat Dominus.*"—The children of Israel went out under the protection of a powerful hand, in the sight of all the Egyptians, who were burying their first-born which the Lord had smitten." (Numbers xxxiii., 3-4). In twenty other places he uses the same language.

This very strongly resembles a triumphant departure; nevertheless Pere Sicard tries to prove that they got away by strategy or ruse, and not by authority.

If he is to be believed, Pharaoh never supposed that it was a question of absolute departure, and the permission that he gave related solely to that three days journey into the wilderness for sacrificial purposes, of which Moses had spoken at first. He, seeing the King's error, had been careful not to explain more fully. He departed toward the left, then toward the right,

hoping by this means, with his unwieldy caravan, to escape the horsemen, that Pharaoh would not fail to put upon his track as soon as he should discover he had been duped. It is thus that Pere Sicard explains the change of route to Etham and the pursuit of Pharaoh.

This strategy is neither very profound nor very loyal, and it is difficult to admit it; it is also altogether incorrect to say that Pharaoh believed the point in question to be merely a three days' journey. In reality, when, after the threatened plague of the locusts, Moses demanded permission to depart with his old men, his women, children, his flocks and herds, Pharaoh noticed the very great augmentation of his demands, and discovered his designs, since he said to him, in retaining the women and children, "*Cui dubium est quod pessime cogitatis? non fiet ita: Sed ite tantum viri et sacrificate Domino; hoc enim et ipsi petistis.*" (Ex. x., 10-11.) Who doubts but you may have some evil designs. It may not be. But go with your men alone and sacrifice to the Lord; for this is what you yourself have desired." If, then, later, under the pressure of a "*powerful hand*," he is forced to let them go, he knows very well that they depart to return no more.

Pere Pujol neither admits the permission, nor regrets for having accorded it. "Nowhere in Exodus," he writes, "will you find a single word from which it may be lawful to deduce repentance over the departure of the Hebrews." The reason of it lies in the fact that Pharaoh never consented to let them go." (Entud. relig.) This conclusion appears very strange; for if the word to *repent* is not in Exodus, the thing itself most assuredly is there; however, if he insists upon the word we shall be able to find it in other places.

"*Quoniam, cum ipsi permississent ut ce educerent, et cum magna sollicitudine præmississent, illos consequebantur, paenitentia acti. Adhuc inter manus habentes luctum, et deplorantes ad monumenta mortuorum, aliam sibi assumpserunt cogitationem inscientiae, et quos rogantes projecerant, hos tanquam fugitivos persequiebantur.*" (Sag. xix., 2-3). "For though they themselves, had permitted them to depart and had hastened their departure, they repented themselves of it and resolved to pursue them.

While they were still weeping over the tomb of their slain children, they madly took another thought and started to follow as fugitives, those whom they had implored to hasten away."

Monsieur l'Abbe Vigouroux, without accepting all the ideas of Pere Sicard, believes, nevertheless, that Moses had been careful that Pharaoh "might not suspect the sequel of his real design." And more than that he commits a fresh blunder when he says that "The road that the Hebrews had followed as far as Etham, led directly and by the shortest route into Palestine, to Gaza, in the land of the Philistines; but on arriving there, it was imperative that God should reveal his real design, in announcing that he wished to conduct them toward Sinai, making them march toward the South instead of the North."

On the contrary, it is certain that Moses had to march on the route to Sinai, which the Lord had specified to him as the place where he was to receive the testimonial of his mission: "*hoc habebis signum quod miserim te; cum eduxeris populum meum de Egypto, immolabis Deo super montem istum.*" (Ex. iii., 12.)

Some raise the objection that this verse does not say that "Moses shall conduct the people to Sinai, but that when he shall have brought the people out of Egypt, Moses shall offer a sacrifice to them." This is a mere criticism upon the words. Nevertheless, Moses tells us in other places that from the outset he took the road to Sinai, and not that to Palestine, and gives the reason why: "*Igitur cum emississet Pharaon populum, non eos duxit Deus per viam terrae Philistin quae vicina est; reputans ne forte poeniteret eum, si vidisset adversum se bella consurgere, et reverteretur in Egyptum; sed circumduxit per viam deserti quae est juxta mare Rubrum.*" (Ev. xiii., 17-18.) "When Pharaoh had let the people go (consequently as soon as the permission had been given), God did not conduct them by the way of the land Philistines, which was close at hand; . . . but God led the people about, through the way of the desert which lies along the Red Sea."

Thus, therefore Moses never did hide and never dreamed of hiding his real purpose from Pharaoh, who perfectly understood

it. He did not take the route to Palestine at first long before, he knew he must double the Red Sea in order to follow the Asiatic bank as far as Sinai or Horeb. Monseur l' Abbé Vigouroux does not correctly interpret, then, the circumstances of the exodus; and, for the best instruction, let us simply listen to Moses himself. He tells us that in the night on which they ate the passover, carefully shut within their houses, situated in Rameses, (evidently the country, and not the city), the Hebrews departed towards Succoth, upon the desert route which borders the Red Sea; having left Succoth, they camped at Etham, at the extreme limit of the desert. They took with them a multitude of common people, quantities of provisions of all kinds, and flocks and herds.

"Nullus vestrum egrediatur ostium suae, usque del mane (Ex. xii., 22). Profectique sunt filii Israel, de Ramasse in Succoth, (37). Sed et vulgus promiscuum innumerabile, ascendit cum leis, oves et armenta, et animantia diversi generis multa nimis, (38). Dominus circumduxit per viam deserti quae est juxta mare Rubrum, (xiii., 18). Profectique de Succoth, castramentati sunt in Etham, in extremis finibus solitudinis, (20).

At Etham Moses had a revelation, in which according to Mon. l'Abbé Vigouroux, God should have made known to him "that He wished to conduct them in the direction of Sinai." I do not know whence he derives that opinion, but I doubt if it be in the Bible, for on the contrary, Moses tells us that he received the order to turn back again to Egypt, and encamp at Pihahiroth, opposite Beelzephon, on the border of the Red Sea. *"Reversi, (or, according to others, conversi), castramententur a regione Pihahiroth . . . contra Beelsephon . . . in conspectu ejus, castra ponetis super mare."* (Ex. xiv., 2).

Moreover, God told him this manoeuvre was for the purpose of preparing a chastisement for Pharaoh, who, in violation of his word, had brought his army in pursuit of them. *"Indurabo cor ejus ac persequetur vos; et glorificabor in Pharone et in omni exercitu ejus. Scientique Egyptii, quia ego sum Dominus, (xiv., 4)."* "I will harden Pharaoh's heart, that he shall follow after them; and I will get me honor of Pharaoh and of all his hosts. That the Egyptians may know that I am the Lord." The last line

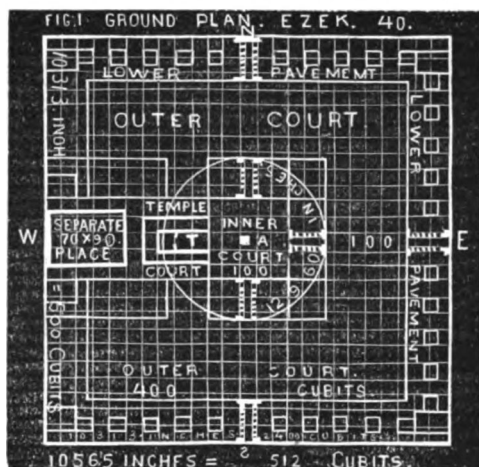
conveys to us the reason for it all. "For it was an extreme necessity that forced this issue; the Egyptians had ignored the lessons they should have learned from past events, so that this punishment completed what was lacking in former chastisement; and that where your people passed miraculously, they found a new occasion of death." *Livre de la Sagesse*,, xix., 4-5).

We draw from this, new information about Etham. We have already seen that it was the terminus of the canal which passed by Succoth; we now know that it was upon the route, which, doubling the Red Sea, conducted to Sinai, and that after one day's retrograde march they found themselves on the Egyptian bank; then, necessarily, it was situated toward the upper end. In this position, which would put it on the route to Egypt taken by the caravans of the desert, or the navigators of the Red Sea, Etham was, undoubtedly a commercial center, that is, a city of importance in a certain sense. We must here take cognisance of the fact that the desert which borders the eastern shore of the Red Sea bore two names; that of Etham, according to Numbers: "*Et ambulantes tribus diebus per desertum Etham*," (Numb. xxxiii., 8), and that of Shur, according to Exodus, "*Et egressi sunt in desertum Sur*," (Ex. xv., 12). Just as the country inhabited by Israel was called Goshen and Rameses. The mount of the Lord, which plays so grand a role in the deliverance of the Hebrews offers us a third example of this double nomenclature. In the third chapter of Exodus, where God announces to Moses that it is upon that mountain that he shall receive the confirmation of his mission, it is called Horeb; whilst in the xix and following chapters, where the events occur it is called Sinai. In Deuteronomy the name Horeb is more often employed. But it is the same mountain, and therefore bears two names, probably in two different languages.

(The above paper translated from the French by Mrs. A. M. Searles.)

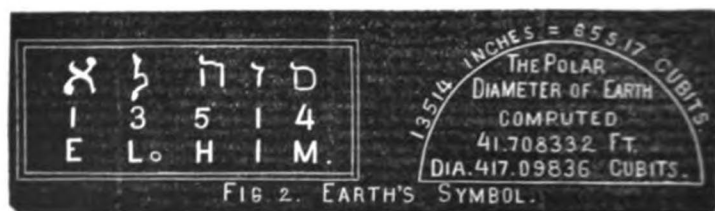
THE TEMPLE-VISION OF EZEKIEL.

It is recorded by the prophet that, in the twenty-fifth year of his captivity, in the beginning of the year, in the tenth day of the month, in the fourteenth year after that Jerusalem was smitten, he was brought, in the visions of God, into the land of Israel and was set upon a very high mountain, by which was the frame of a city on the south. This record is followed with a minute description of the wall, the gates, the courts, the temple and the altar, together with various other appointments relating to the design of the city. The revelation was made under circumstances of great solemnity. A man stood in the gate, whose appearance was like the appearance of brass, with a line of flax in his hand and a measuring reed, and he said to the prophet, Thou art brought hither to the intent that I might show thee what thou shalt declare to the house of Israel. The man then measured the city, the wall, the gates, the courts, the temple and the altar. Our paper is a study of these measurements.



Admitting the Temple-Vision to be a Divine revelation, we must premise that the numerical terms used in its description signify something worthy of its source. Whether we have touched the

truth of the matter may be left to the test of evidences. We approach the subject reverently, with no desire to transform that marvellous revelation into a mere mathematical curiosity, nor yet in the presumption that we see more than a small fraction of what the vision may signify. The facts, however, which we shall present cannot be gainsaid.



The city, Fig. 1, consists of an inner court 100 cubits square in the center of which is the brazen altar A. To the west of this court is the temple, T, 20 cubits wide and 60 cubits long, and still farther to the west is the separate place, 70×90 cubits. On the north, east and south sides of the inner court are gateways, G, G, G, 50 cubits long, leading to the outer court, which is 400 cubits square. From the outer court three corresponding gateways, 50 cubits long, lead across the lower pavement to exits in the enclosing wall. Upon the lower pavement indicated by the small squares are the thirty buildings not measured, nor very definitely placed in the vision. The space enclosed by the wall is 500 cubits square, which, laid off into 25 equal squares, would give the central space of 100 cubits square, in the midst of which is the altar, A.

It was the custom of the ancient Hebrews to designate numbers by the letters of their alphabet, in alphabetical order. Thus: A or Aleph stood for 1, and B or Beth for 2. The numerical value of letters appears to have been the basis of certain words used in Hebrew metrology to indicate the relation of one measure to another, as the log, the bath, the seah, etc. In this way names served as numerical descriptions or symbols of things. Two names, Elohim and Jehovah, are very prominent in the

Temple-Vision. The letters, with their numerical values, stand as follows:

E-Lo-H-I-M.	Je-Ho-Va-H.
1 3 5 1 4.	10 5 6 5.

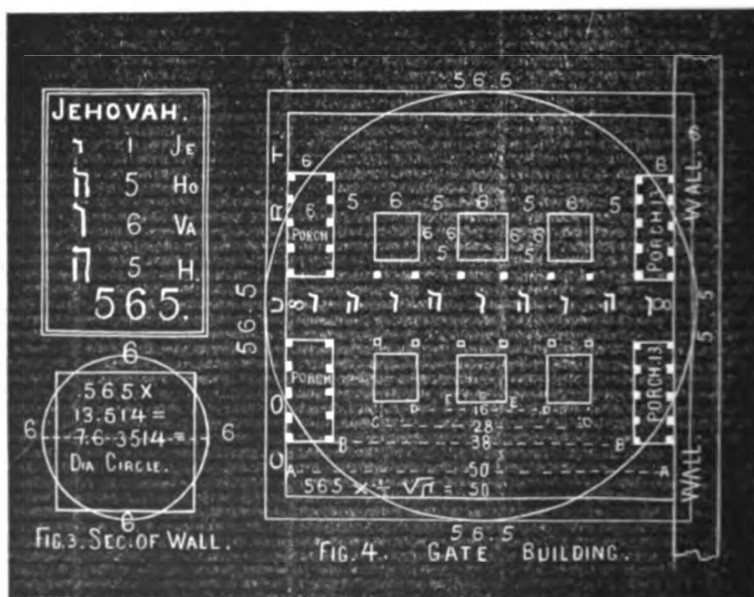
But letters, according to the intention of the writer had a decimal change of value; thus, L might stand for 30 or 300. On this principle Elohim could have the numerical value 103514, and Jehovah could be numerically written, 1565. The word Jehovah is derived from the verb Ha Va H, which means to

be, exist, hence 565 may be taken as the shorter numerical symbol of Jehovah. We purpose now to show that the measures of the temple and city of Ezekiel are simple and systematic combinations of these numerical symbols of Elohim and Jehovah. The measures are given by the prophet in round numbers, evidently the proper way to use numbers symbolically. Wherefore the coincidence, we shall note are integrally true though not decimally exact. In the Hebrew and Anglo-Saxon correlations we give here, the cubit is taken to be 20,626 or 20.625 inches.† Before exhibiting coincidences in the Temple-Vision we may note a striking coincidence between the numerical form of Elohim and the polar diameter of the earth. Let the semicircle, Fig. 2, be $\left\{ \begin{matrix} \text{E Lo H I M} \\ 1 \quad 3 \quad 5 \quad 1 \quad 4 \end{matrix} \right\}$ inches, = 655.17657 cubits, then the diameter will be 417.09836 cubits, which coincides remarkably well with the number of feet obtained as the best result of the Russian, French and Indian measures for the polar diameter,

†An old Egyptian cubit in the Turin Museum is divided into 28 digits, 25 being of uniform length .729 inch. The 15th and 24th are especially marked giving a particular measure of 9 digits or 6.561 inches, which is the diameter of a circle having a circumference equal to the whole length of the cubit or 20.611 inches, or 28.28 digits of .729 inch each. Now 28.28 is $\frac{1}{2}$ of the Jehovah symbol 56.56. If we extend this half symbol to 28.2828 and also the digit measure to .82925, nine of these digits give the diameter of a circle having a circumference equal to 20.619 inches, or the whole length symbolically would be $28.2828 \times .72924 = 20.625$ which is the cubit of the Temple-Vision. It thus appears that the cubit itself by number and by measure symbolized Jehovah or the Divine Presence. As the entire system of Hebrew metrology was built on the cubit, it follows that the name of Jehovah was identified with all the weights and measures of the Hebrews, and we believe that the same identification may be shown in Anglo-Saxon weights and measures. See Ast. Metrology, Vol. 2, No. 6, International Standard. The symbols 5.65 +, expresses the value of *apparent* gravity at the *equator*. See Deschanel's Nat. Philosophy, pp. 61, 66, 67. Appleton & Co., New York, 1876.

41,708,332. In the language of symbolism this might be read God sitteth upon the circle of the earth.

The height of wall being 6 cubits and the thickness 6 cubits, a transverse section of it, Fig 3, is a square 24 cubits in perimeter. But the symbol of Elohim, 13514, multiplied by the shorter symbol of Jehovah, 565, is 7635410, or the diameter of a circle having the circumference 2398720. The one thousand thousandth part of this is 23.98 or in round numbers 24. A circle being the symbol of eternity, the enclosing wall of the Vision may symbolize Elohim and Jehovah in eternal union or oneness round about the city of God, as a wall of defence.



The gateways or gate buildings, three outer and three inner, are alike, Fig 4. The length of each is 50 cubits, there being a clear passage-way of steps through the middle 8 cubits broad. It is equal to the side of a square whose area is equal to that of a circle having a diameter of 56.5 cubits, and is divided thus:

A porch at each end 6 cubits deep, 2×6 , 12 cubits.

Three little chambers on either side 6 square, 3×6 , 18 "

Four spaces between the chambers 5 deep, 3×5 , 20 "

Total, 50 cubits.

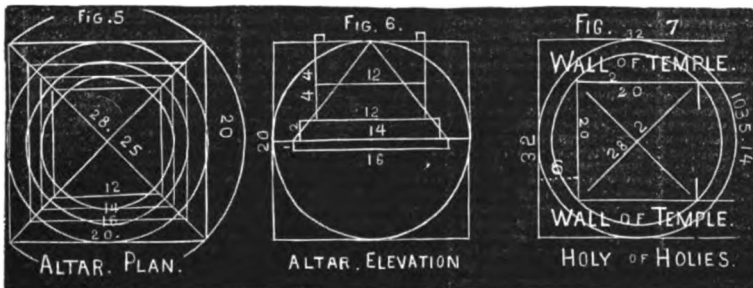
Thus each Gate-Building is laid off in alternate sections of 5 and 6 cubits; 6-5-6-5-6-5-6-5-6, which is a bold numerical exhibit of the Jehovah name symbolized in the numbers 5-6-5.

But Elohim in union with Jehovah is also symbolized in the Gate-Buildings in a remarkable manner. The product of the two symbols taken decimally in hundredths is .76 By this decimal fraction and 50 cubits the length of the Gate-Building we may lay off its sections of 6 and 5 thus, Fig 4:

50	=	50.00	or in round numbers,	50 = a a.
$50 \times .76$	=	38.00	" "	38 = b b.
$50 \times .76^2$	=	28.88	" "	28 = c c.
$50 \times .76^3$	=	16.66	" "	16 = d d.
$50 \times .76^4$	=	5.565	" "	6 e e.

The little chambers being 6 cubits square may have the same symbolical meaning as the wall section, 6 cubits high and 6 cubits thick; while every space between the little chambers, measured round about, is 5-6-5-6.

The depth of the outer court, Fig 1, is 100 cubits, but if one step, one cubit deep, be allowed outside of the inner Gate-Building, which has eight steps instead of the seven of the outer Gate-Building, there will be a clear space of 99 cubits between the outer and inner gateways, or nine times (5×6) cubits.



✚ The inner court, Fig 1, is 100 cubits square. A division of it into 25 equal squares gives a central space 20 cubits square

wherein stands the Brazen Altar A. The symbolism of this square and of the Altar built upon its geometrical lines is worthy of notice. Let $56.5 \div 2 = 28.25$, be the diameter of the outer circle in cubits Fig 5, the side of its inscribed square is in round numbers 20 cubits, which is the measure of the Holy of Holies. Now let a circle be inscribed within this square, then a square equal to it, in perimeter, will have a side 16 cubits, which is the measure of the base of the Altar, 16 cubits square. Again let a circle be inscribed within this base-square, then a square equal to the circle in area will have a side of 14 cubits which is the measure of the settle, 14 cubits square. Once more let a circle be inscribed within this settle-square, then a square equal to the circle in area will have a side of 12 cubits, which is the measure of the Altar, 12 cubits square.

The following table shows the measures to the second place of decimals and in round numbers:

One-half of the Jehovah symbol, $56.5 =$	28.25 cubits.
Diameter of outer circle, 28.25 cubits.	
Side of inscribed square,	19.97 "
" of the Holy of Holies, round numbers,	20.00 "
Diameter of first inscribed circle, 16.97 cubits.	
Side of square of equal perimeter,	15.70 "
" base of the Altar, round numbers,	16.00 "
Diameter of second inscribed circle, 15.70 cubits.	
Side of square of equal area,	13.92 "
Side of settle of the Altar, round numbers,	14.00 "
Diameter of third inscribed circle, 13.92 cubits.	
Side of square of equal area,	12.33 "
" of Altar symbolical measure, round numbers,	12.00 "

The base of the Altar is one cubit high, Fig 6, the settle is 2 cubits, the altar above the settle is $4 + 4 = 8$ cubits; hence from the top of the base to the top of the Altar is 10 cubits, which is the radius of the circle inscribed in the 20 cubit square. Symbolically therefore this is a π Altar erected within a square of 20 cubits the diagonal of which is $\frac{1}{2}$ of 56.5. In view of these measures of the Holy of Holies and of the Brazen Altar we may say, in the reverent language of symboli-

tic numbers, the name of Jehovah traces a cross upon the floor of the Holy of Holies and beneath the Altar of Sacrifice. But Elohim encompasses the Holy of Holies. Let the symbolical circumference 2×1035.14 inches be drawn concentric with the Holy of Holies, Fig 7. The diameter of this circle is 31.9 cubits or in round numbers 32, and the side of its circumscribed square is 32 cubits. The Holy of Holies being 20 cubits square the space between these two squares is $\frac{32-20}{2} = 6$ cubits, which

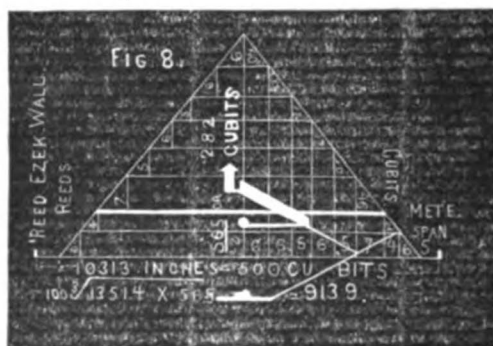
is the thickness of the wall of the temple. If then the Holy of Holies is "crossed" on its floor by Jehovah it is encircled in its wall by Elohim.

The Position of the Holy of Holies in relation to the Brazen Altar is unique. From the centre of the Altar A, Fig 1, to the outer face of the inner gateways is 100 cubits. The circumference of a circle having a radius of 100 cubits, with its centre in the midst of the Altar, will touch the centre of the Holy of Holies, and measure 200π cubits or 12,960 inches equal to one one-hundredth of the number of seconds in a circle or one one hundredth of the number of grains in the ancient Hebrew gold talent which means circle. No doubt the symbolism of the measures of the Temple-Vision had many ramifications in Hebrew life, most interesting and significant; but enough is here given in evidence that the measurements of the Vision signify the Divine character of the city, its walls its gateways, its courts and temple, its buildings and appointments. The sacred names appear to be traced everywhere by the line and by the square.

To many of our readers the following coincidences brought out in the study of our subject cannot fail of interest. The space enclosed by the wall in the Temple-Vision is five hundred cubits square. Squareness, five-ness and π -ness, as we have shown, are notable features of the Vision—the inner court consisting of 25 squares, each equal to the area of the Holy of Holies, and the whole inclosure consisting of 25 squares, each equal to the area of the inner court. The Great Pyramid is in like manner notable for squareness, five-ness and π -ness. Of the value or significance of the coinci-

dences now to be presented we need not speak; the facts must certainly attract attention.

Extending beyond the base of the Pyramid is a pavement of uncertain breadth. It is computed from certain rock cuttings which are supposed to be its boundary lines. The outer edge of these rock cuttings varies from 530 to 628 inches in distance from the sides of a central square $9,068.8 \times 9,068.8$ inches ('Petrie's Pyramids and Temples of Gezeh, p. 45). The extreme mean distance between the cuttings on the N. and S. sides at about 750 inches from the W. side is computed from the following measures. Width of pavement, N. side, 615.9, 618.7, 616.2, mean 616.9; S. side, 627.9; sum of N. and S. sides, 1,244.8; which, added to the breadth of the central square, 9,068.8, gives 10,313 inches, \approx 500 cubits (Fig. 8) the outside measure of the pavement from N. to S., which is the measure of the space enclosed by the wall in the Temple-Vision, 500 cubits square.



The Pyramid is built in courses of varying thickness, but apparently with regard to a certain fineness of design—a specially thick course being followed by a graduated series of thinner courses. The horizontal bars in fig. 8 indicate the relative positions of these thick courses. Now, it so happens that the intervals between the thick courses are somewhat regular. The vertical lines are drawn from the northern edges of these courses to the base, hence the horizontal distances between the edges are indicated by the numerals in the spaces at the base, a unit of these numerals being equal to a pole, or

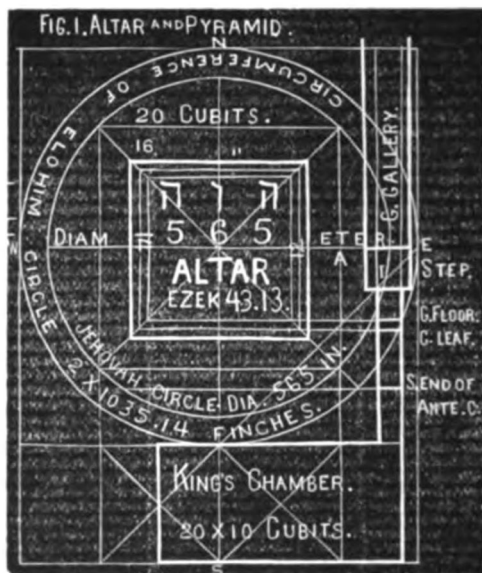
"mete-span" of 5 cubits, or 103.13 inches, which is $\frac{1}{100}$ of the side of the pavement square. These pole measures of the spaces are given in round numbers, and read thus from the centre: 6, 6, 5, 6, 5, 7, 4, 6, 5. With one exception, 7 and 4, this coupling of 6 and 5 in this series is in remarkable agreement with the series of 6 and 5 which we found in the Gate-Buildings of the Temple-Vision symbolizing the name of Jehovah, 565. But inasmuch as that exception occurs by reason of the thirty-fifth course being placed below what would be its normal position in a perfect series of 6 and 5 there may have been a motive in the displacement, connected with the internal purposes of the construction. The following is a comparison of this series of pole measures with the series of cubit measures in the Gate-Buildings:

Pole measures to hundredths.	6.27, 5.99, 4.75, 6.05, 4.59, 7.31, 3.61, 5.68, 5.69.								
Pole measures round numbr's	6, 6, 5, 6, 5, 7, 4, 6, 5.								
Cubit meas'r's Gate-B'ldings.	6, 6, 5, 6, 5, 6, 5, 6, 5, 6.								

Two or three other courses of special thickness exist, but they do not appear to belong to the 5, 6, 5 series. On the left of Fig. 8 a like series of 5 and 6 is given, showing by reed measures in round numbers the vertical distances between the thick courses, which are given in cubit measures on the right hand. The geometrical height of the Pyramid is also shown by the symbol 565, for the height is 5,818.6 inches = 282.1 cubits, or in round numbers, one-half of 565, so that the diameter of a circle whose radius equals the height of the Pyramid is, in round number cubits, 565.

We turn lastly to see how the Altar of the Temple-Vision would stand related to the internal order of the Pyramid, provided the centres of the two structures were identical in place. Fig. 9 shows the relation. The inner circle represents the Jehovah symbol 565 (inches dia.), approximately enclosing the 20 cubit square. The outer circle is the Elohim symbol, $2 \times 1,035.14$ inches circumference. The inner square in the Jehovah circle represent the plan of Base, Settle and Altar of the Temple-Vision. The king's chamber, ante-chamber, step and grand

gallery are duly indicated. At a glance the center of the Elohim circle appears to touch the N. wall of the king's chamber, while the circumference of the Jehovah circle strikes



the middle of the great step. But the number and closeness of the coincidences are best shown by the following table:

- | | | | |
|---|---|---|------------------------------|
| 1 | { | The radius of the Elohim circle is | 329.5 inches |
| | | The N. wall of the king's chamber is S. of c'ntr | 330.6 ± 9 Petrie |
| 2 | { | The radius of the Jehovah circle is | 282.5 inches. |
| | | The middle of Great Step is E. of centre | 284.4 ± 3. Petrie. |
| 3 | { | By intersection of AI and EF at right angles | |
| | | I is S. of centre | 61.6 inches. |
| | | The S. wall of Gallery is S. of centre | 61.3 ± 9 Petrie. |
| 4 | { | The S. face of Altar is S. of centre | 12.22 cubits = 127.0 inches. |
| | | The beginning of granite floor is S. of step face | 126.2 ± 9 P. |
| 5 | { | The S. face of settle of Altar is S. of centre | |
| | | 12.22 cubits = | 143.5 inches. |
| | | The middle of granite leaf is S. of step face | 143.4 Smyth. |
| 6 | { | The S. side of square inscribed in Elohim circle | |
| | | is S. of centre | 229.1 inches. |
| | | The S. end of Ante-Chamber is S. of step face | 229.4 ± 9 Petrie. |

- 7 { By construction of squares the E. wall of King's chamber
is E. of centre 303.4 inches,
By measurement it is E. of centre 305.0±3. Petrie.
- 8 { Referring to Fig. 1 the N. side of the square having a per-
imeter equal to the circumference 12960 inches is N. of
centre 1620.0 inches.
The N. end of groove in wall of Gallery is N.
of centre 1619.4±.8 Petrie.

The following points may be noted :

The height of the Pyramid in cubits is one half of 565.

One hundred times the cube root of the product of the sym-
bols 1351.4 and 565. is 9139.94.

The geometrical base of the Pyramid is 9139.87.

The square of 1-100,000th of the product of these symbols
is in round numbers $76^2 = 5776$.

The apex of the Pyramid above pavement in intesges is 5777.

The 1-10,000th of the product of the symbol 565 and the
number of days in one year, 365, is 20.62 +

The cubit of the Temple-Vision and of the Pyramid is 20.62 +
inches.

The date of the Temple-Vision appears to have been 565
years before the incarnation, about the time of the first full
moon next after the autumnal equinox.

The services of the Temple-Vision are suggestively described
by the prophet. We must be content with an outline of the
grand processional of worshippers lifting up their voices as they
stand upon each of the seven steps of the outer gateway, and
each of the eight steps of the inner gateway. The songs of
the steps, or Psalms of Degrees, are the 120th-134th inclusive,
and are believed to have been written for use in Solomon's tem-
ple. The position of the gate-buildings in relation to the altar
and the temple, as shown in Fig. 1, and the symbolistic struc-
ture of the gate-buildings as shown in Fig. 4, being borne in
mind, the processional fitness of the songs of the steps will be
evident.

On the first step, just in from the precincts outside of the
wall, or, as it were, passing in to a place of safety—a reflection
on the afflictions of the captivity—Ps. 120, "My soul hath
long dwelt with them that are enemies to peace."

On the second step, looking out from the covered porch to the city rising before them—Ps. 121, "I will lift up mine eyes to the hills from whence cometh my help."

On the third step, inside the porch and in the gateway—Ps. 122, "Our feet shall stand within they gates, O Jerusalem."

On the fourth step, abreast the middle little chambers, and fairly viewing the heavens above—Ps. 123, "Unto thee lift I up mine eyes, O thou that dwellest in the heavens."

On the fifth step, a thanksgiving for deliverance—Ps. 124, "Our soul is escaped as a bird out of the snare; our help standeth in the name of the Lord."

On the sixth step, under the inner porch of the outer gateway and in full view of the court and of the temple buildings rising still higher before them—Ps. 125, "They that trust in the Lord shall be as Mount Zion which standeth fast forever."

On the seventh step or floor of the court, just inside the outer gateway and going on towards the inner gate—Ps. 126, "The Lord hath done great things for us already, whereof we rejoice."

At the first step of the inner gateway, leading to the court of sacrifice and to the temple—Ps. 127, "Except the Lord build the house, their labor is but lost that build it."

On the second step, under the porch—Ps. 128, "Blessed are all they that fear the Lord. . . . The Lord shall bless thee out of Zion."

On the third step, inside of the porch—Ps. 129, "Many a time have they fought against me from my youth up may Israel now say, . . . but the Lord hath hewn the snares of the ungodly in pieces."

On the fourth step, in the midst of the little chambers—contemplating the sacrifice—Ps. 130, "I look for the Lord, my soul doth wait for him. O Israel trust in the Lord, for with the Lord there is mercy; . . . he shall redeem Israel from all his sins."

On the fifth step, prostration of soul—Ps. 131, "Lord I am not high minded, my soul is even as a weaned child. O Israel trust in the Lord from this time forth for evermore."

On the sixth step, in the porch and in full view of the altar and temple—Ps. 132, "Arise, O Lord, into thy resting place,

thou and the ark of thy strength. Let thy priests be clothed with righteousness and thy saints sing with joyfulness—the Lord hath chosen Zion to be an habitation for himself—he hath longed for her.”

On the seventh step, inside of the porch and within the inner court—Ps. 133, “Behold how good and joyful a thing it is, brethren, to dwell together in unity. Upon the hill of Zion the Lord hath promised his blessing and life for evermore.”

On the eighth step, looking towards the altar and the temple—Ps. 134, “Behold now praise the Lord all ye servants of the Lord, ye that by night stand in the house of the Lord, even in the courts of the house of our God.”

The following psalm, the 135th, is a grand outburst of praise at the very doors of the temple: “O praise the Lord for the Lord is gracious. O sing praises unto his name for it is lovely. Praise the Lord ye house of Israel. Praise the Lord ye house of Aaron. Praise the Lord ye house of Levi. Ye that fear the Lord, praise the Lord. Praised be the Lord out of Zion who dwelleth at Jerusalem.” It is a veritable hallelujah chorus for the temple service. We can hardly imagine the grandeur and beauty of such a procession, with its rich and varied environment of symbolistic architecture. Yet, as a whole, it is as a vision of that magnificent tribute of praise to the Son of God, which is even now rising up from the heart of human life and filling the city revealed to the prophet in the visions of God, as it is written: “Behold waters issued from under the threshold of the house eastward—first ankle-deep, then knee-deep, then thigh-deep; after that swimming-deep. And the man that had the line of flax in his hand said: these waters (streams of living people, the servants of God bearing the life of God in them) issue out toward the east country and go down into the desert and go into the sea. And it shall come to pass, that everything that liveth, which moveth, whither soever the rivers shall come, shall live.”

With such beautiful and impressive symbolism, traced by measure and proportion in the very streets and buildings of the “city,” what might we not hope to find hid away under the cover of geometrical forms and relations? Surely the spirit of

prophecy must dwell in the prophetic vesture. The seven-fold gifts of the spirit, associated with admission into the city of God, and the courts of the house of Israel, as seven steps of escape out of the precincts of the city, are truly followed by the eight cardinal virtues or steps of approach that lead up to the altar of sacrifice. If the "city" is a vision of the city of God, even of the kingdom of the Lord Christ, then his NAME is written there by line and by measure, and his number is the number of HIS PRESENCE. All Holy Scriptures are written for our learning, that we may hear, read, mark, learn and inwardly digest them, and by patience and comfort of the holy word embrace and ever hold fast the blessed hope of everlasting life given us in our Saviour Jesus Christ.

H. G. WOOD.

THE GRAND SEAL OF THE UNITED STATES OF AMERICA.



Amongst the many minor incidents in the history of the United States of America, there is one in particular that has of late awakened the attention of some who have been studying the rise and progress of that country, as taken in connection with the original history and descent of the British nation. I refer not only to the circumstances, whatever they may have been, that led to the adoption of the several devices that compose the two sides of the great seal of the United States, but to the very remarkable significance of those devices, and of the mottoes which the wood-cut at the top of these pages presents to our view.

Dr. Wild of New York, to whose little book, 'Manasseh and the United States,' I am indebted for the information, tells us that the items on the seal were suggested by St. John Prestwich, Bart, an Englishman, to the American Minister, John Adams, by whom they were conveyed to Congress and adopted.

I shall not now wait to enquire how such a seemingly strange association of ideas came to be represented, but proceed at once to observe that the eagle is surmounted by thirteen stars; that he bears on his breast an escutcheon on which are thirteen

stripes, and holds in his talons thirteen arrows. Next we see in the eagle's beak a scroll with the motto "*E pluribus unum*," declaring America to be "one out of many," or "from among many;" so we are led to enquire, Many what? and How many?

The second question is answered at once by the thrice repeated thirteen already noticed; and we know as a fact that the number thirteen coincides with the number of States of which the Union was composed at the time of separation. These thirteen States, however, could not be the many referred to in the motto, seeing that America, as a whole, could not be one of them, except upon the principle on which Eve has been styled "the fairest of all her daughters."

But now the idea is gaining strength that the American people are the representatives of one of the Lost Tribes, and so are inheriting the blessings promised to Manasseh, the elder son of Joseph and head of the thirteenth tribe.

Here again the coincidence becomes remarkable between the number thirteen and the number of the tribes; and it gives effect and purpose to the idea contained in the motto, declaring America to be one out of the many, that is, one of the thirteen Israelitish tribes.

Now, assuming, as I do, that the arrangement of these devices, in what way soever suggested, was not without a meaning and a purpose, this repetition of the number thirteen gives us a clue to the proper understanding of the other emblems on the seal, whilst they at the same time all unite to confirm us in the correctness of our assumption regarding the reference to the tribes of Israel.

Now, let us observe the order in which the stars are placed, namely, twelve of them representing the nominally twelve tribes, and enclosing a quadrilateral space—three on each side—thus corresponding with the manner of encampment of the Israelites during their journeying through the wilderness; and let us note the one star in the centre answering to the position of the Levites in the midst of the camp round about the tabernacle, as we read in the first chapter of Numbers, verses 50 and 53. And further, which confirms this idea, we see depicted above all the cloud which hung over the camp and accompanied

the wanderers all through the period of their weary way. (See Numbers, ix, 15-23.)

Our attention is next drawn to the attitude of the eagle, which is altogether different from that of the royal bird that finds a place upon the standards of Austria and Russia. Here the eagle is represented without any deformity and with the wings turned upward, reminding us of the eagles described in the first chapter of Ezekiel and 11th verse. And we must remember that the prophet Ezekiel is most particular in his description of all connected with the future history of the Israelitish tribes. Next, the olive branch in the right talon of the eagle, and the arrows in the left, plainly illustrate the divine command given to the Israelites, as we find it in Deuteronomy, xx, 10, 12: "When thou comest nigh unto a city to fight against it, then proclaim peace unto it, . . . and if it will make no peace with thee but will make war against thee, then thou shalt besiege it." And here we must not fail to observe that the action of the Americans in making overtures of peace to the mother country, previous to the commencement of the war of independence, was strictly in accordance with the divine precept.

But a further consideration of this olive branch awakens a new thought when we recollect that in the eleventh chapter of Revelation St. John speaks of the two witnesses as two olive trees; and some expounders of prophecy have not hesitated to point to the two houses of Israel and Judah as the witnesses there referred to. But without meaning for a moment to contest the point whether two individual witnesses may or may not also be there foreshown, there is an ample collection of texts in the Old Testament in which the tribes of the House of Israel are addressed as witnesses for God in the latter times; "Ye are my witnesses, saith the Lord, and my servants whom I have chosen." If then God's witnesses are symbolized as olive trees, and if, as I have already shown, the tribes of the House of Israel are witnesses for God, we may very clearly perceive the inference that may be drawn from the representation of a branch of the olive tree in the claw of the American Eagle.

But to return to the idea of peace and war, I should remark that the characteristic weapon of the Israelites was the bow and

arrow, and that the tribe of Manasseh is specially mentioned in 1st Chronicles, v, 18, as having excelled in the use of that weapon.

Now, before passing to the consideration of the motto, I would observe that there was amongst the Jews of old a peculiar science known as the Cabbala, one system of which, called Gematria, is described in Kitto's Encyclopædia of Biblical Literature, as the arithmetical mode of interpretation, in which the letters of a word are regarded with reference to their value as numeral signs, and a work is explained by another whose united letters produce the same sum; and the writer gives—or rather ought to have given—his example thus.

The *two* words in the original Hebrew of Gen., xlix, 10, meaning Shiloh *shall come*, the letters of which, when considered as numerals, amount to 358, are explained to refer to Messiah, because the name Messiah being in the same way value for 358, they are both numerically equivalent.

I must explain here, for the information of some of my readers, that the letters of the Hebrew and Greek alphabets were the only characters used in those languages to express numbers, and most people are familiar with the few Roman letters representing figures which are still in use among ourselves at the present day.

To most numbers commencing at unity is attached an innate mystic meaning; for example: The number *one* in every language expresses unity; *two* is said to be emblematic of the incarnation—the second divine person; *three* is a symbol of the Trinity; *four*, a divine number; *five* is expressive of sacred order; *six*, secular; and *seven*, spiritual perfection; the latter also denoting completion, etc., etc.

I have already said that to most numbers, commencing at unity, is attached an innate mystic meaning; and amongst those found occurring in the Scripture, no one is more remarkable than the number 153. It occurs but once in the Bible, where it is specially mentioned as the number of great fishes taken in the miraculous draught on the sea of Galilee. I am indebted for the information in the preceding paragraph to a writer in 'Our Rest' of July, 1878, Mr. H. A. Powers, who gave some

other extracts from Dr. Mahan's book in which the latter associated the number 153 with those whom I shall describe as that people, to seek and to save whom, our Lord declared he was specially sent and to whom he, on another occasion, particularly referred when he said to his disciples, "I will make you fishers of men." But he spoke more plainly when he told them he was not sent but to the lost sheep of the house of Israel. Now, after these preliminaries, if we take out the Roman numerals from the motto, *E pluribus unum*, and set down their equivalents thus, L=50, V=5, I=1, V=5, V=5, V=5, M=1000, we find the sum of the figures to be 1071, which is exactly seven times 153, or that number brought up by the seven-fold repetition, to its full or completed form. And the word *sugkleronomoi* joint heirs, (as noticed by the writer already referred to), in Rom. viii., 17, where St. Paul, addressing those called saints, says, that if we be children of God, we become joint heirs with Christ, is also value for 1071, which number seems to point to our American brethren as joint heirs with us, through Christ, to that glorious liberty to which we hope to attain upon "the manifestation of the sons of God."

Throughout the Bible the term "Sons of God" is applied to the house of Israel, and that phrase in the original Hebrew is numerically equivalent to 153.

Again, if we turn to the thirty-fourth chapter of Ezekiel and thirtieth verse, where occurs the expression, "The House of Israel, my people," we shall find that the numerical value of the corresponding Greek words, *Laos mou oikos Israel*, is just 1,530 or the number of the fishes multiplied by 10, the number of the tribes of the House of Israel. And further, to show how this number seems to attach itself to Israel, I would observe that the sum of the sums of the several figures composing the several numbers expressed by the Greek letters in the thirteen names used to denote the tribes (exclusive of Levi, which had no inheritance), and taken as they occur in the Septuagint version of the thirty-fourth chapter of Numbers, makes also 153.

$$\begin{array}{rcl} \text{Ρουβην} & = & 630 = 9 \\ \text{Γαδ} & = & 8 = 8 \end{array}$$

Μανασση	=	500	=	5
Ιουδα	=	485	=	17
Συμεων	=	1495	=	19
Βενιαμιν	=	168	=	15
Δαν	=	55	=	10
Ιωσηφ	=	1518	=	15
Εφραιμ	=	656	=	17
Ζαβουλων	=	1360	=	10
Ισσαχαρ	=	1112	=	5
Ασηρ	=	309	=	12
Νεφθαειμ	=	650	=	11

153

There is also a remarkable instance of the presence of the two numbers, 1,071 and 153, in the Hebrew of the following text taken from the fourteenth verse of the One Hundred and Forty-eighth Psalm, where we read, "He also exalteth the horn of his people, the praise of all his Saints, even of the children of Israel." The total value of the letters composing the entire of this portion of the verse in the Hebrew is 3,213, which is exactly three times 1,071, and twenty-one times 153.

I shall now take the names of the *twelve* tribes from the first chapter of Numbers, where we are given "the sum of all the congregation of the children of Israel after their families from twenty years old and upward, by their armies," and I put down the gross sum as stated in the twenty-second verse, 603,550, which is fifty times 12,071. Here we have *twelve* thousand and *seventy-one* to compare with the *ten* hundred and *seventy-one* of the former calculation, reminding us of the *numbers sealed* from each tribe, although the tribes named are not exactly the same as those mentioned in the seventh chapter of Revelation.

The number of the congregation is as follows:

Reuben.....	46,500 = 15
Simeon.....	59,300 = 17
Gad.....	45,650 = 20
Judah.....	74,600 = 17
Issachar.....	54,400 = 13
Zebulon.....	57,400 = 16
Ephraim.....	40,500 = 9

Manasseh.....	32,200 = 7
Benjamin	35,400 = 12
Dan.....	62,700 = 15
Asher	41,500 = 10
Napthali.....	53,400 = 12
	<hr/>
	603,550 163

$$603,550 \div 50 = 12,071.$$

Now, if we compute the sum of the several figures composing these numbers, as above, it will amount to 163, whilst the value of the remaining words of the 14th verse of the 148th Psalm, "a people near unto him" (עַם קָרֵב), is 978, exactly six

times 163. And if we turn to Rev. xvii., 14, we may read that they that are with the Lamb, namely, the saints, are said to be "called and chosen and faithful" *κλητοι και εκλεκτοι και πιστοι* which words are value for 438, 31, 460, 31, 670—in all 1,630, or ten times 163. And this 163 is equivalent to 153, the number of the fishes, plus 10, the number of the tribes of the house of Israel, as distinguished from the two tribes of the house of Judah.

Out of many more examples which might be given, I shall conclude my observations on this side of the seal with one in which the number *ten* specially appears, connecting the ten servants mentioned in the parable (Luke xix, 3) with the lost tribes. The Greek of "ten servants" *δεκα δουλοι* is equal to $30 + 584 = 614$, which, divided by 4, produces 153.5. The fraction may suggest to the "*Half tribe*" of Manasseh a new thought on the subject of their genealogy, especially as it appears that Rebekah in the Hebrew is a value for 307, which is twice 153.5, whilst in the Greek *Ρεβεκκα* is exactly 153.

I shall now turn to the reverse side of the United States' seal. Here we have a pyramid, and a most remarkable representation of a pyramid it is, seeing that the top, or chief corner stone is wanting. This peculiarity, it will be perceived, makes it a true picture of the Great Pyramid of Geezeh, concerning the wonderful discoveries in which, as regards external and internal measurements, so much has been written of late years.

Now, we see represented over this incomplete pyramid a triangle, having within it an eye. And this triangle, so like that which we see used as an emblem in the higher orders of Freemasonry, is nothing more nor less than a figure of the stone required to complete this truly wonderful building. And this triangular figure may be considered as emblematic of the Deity in his great triune of one God in trinity and trinity in unity; and so it brings to our mind those words of St. Paul (Eph. ii., 20) setting forth Jesus Christ as "the chief corner stone in whom all the building fitly framed together groweth unto a holy temple in the Lord." But we can scarcely fail to observe that this three-sided figure with the all-seeing eye appears here to convey to our minds the idea of the ever watchful care of God for his people, and reminds us of the inspired words of the Psalmist, "I will instruct thee and teach thee in the way that thou shalt go; I will guide thee with mine eye." (Ps. xxxii., 8.) This triangle is surrounded by a glory, and if we take the Hebrew words **את-כבוד יהוה**, the glory of the Lord, as they occur in Exodus xvi, 7, we find them to represent numerically 401, 32 and 26, or a total sum of 459, which is exactly three times 153.

Let us now analyze the motto, "*Annuī capitis*." Picking out therefrom the Roman numerals and U taking the form of V, we have the letters VICI, which are value for 107, and which we cannot help observing, *en passant*, make the Latin word for "I have conquered."

The number 100 with the addition of 7 is said to represent "God's flock spiritually perfected." Finding such a significance attached to this number, it seems worthy of remark that in the 63d chapter of Isaiah and 17th verse, where we read, "Return for thy servants' sake *the tribes* of thine inheritance." The word for tribes in the original Hebrew is **שבטים**, and equivalent in number to 321, which is just three times 107—the four letters (reading from right to left) standing for 300, 2, 9 and 10. And there is a corresponding passage in the Septuagint version of Isaiah xliii., 12, where the words *υμεις εμοι μαρτυρες* "ye are my witnesses,"—addressed to Israel, make in the total a multiple of 107. Thus $655 + 125 + 1,146 = 1,926$, which divided by 18 produces as follows:

$$\begin{array}{r} 6)1,926 \\ \underline{3)321} \\ 107 \end{array}$$

Again I find in Deuteronomy vi., 4-5, where we read, "The Lord our God is one Lord, and thou shalt love the Lord thy God with all thy heart," that the value of those words in the Hebrew character is equal to 2,140, which divided by 2 produces a sum just ten times 107. Here the correspondence in regard to number appears to point to the intimate connection between God and his ten-tribed people of Israel as distinct from the house of Judah. The words are יהוה אלהינו נכל-לבבך

יהוה אלהינו יהוה אחד ואהבת את ⁵³⁴ ⁵² ⁵⁴⁶ ²⁶ I may remark that this ⁴⁰¹ ⁴¹⁴ ¹³ ²⁶ ¹⁰² ²⁶ is a part of one of the texts written in the Jewish phylacteries or Tephyllin made to be worn on the forehead; and the portion quoted consists of ten words.

I would now draw attention to a remark of Mr. Grattan Guinness in his work, "The Approaching End of the Age," that "to the 12 of the natural Israel God has added a new 12, the final number being twice 12 or 24." He says, also, that 3 and 8 are "new creation numbers;" and you will perceive that the product of these two is also 24. Now, I shall take this 107, the value of the words "*annuit cœptis*," and multiply it by 24. It produces 2,568. Now let us write down the following three Greek terms, expressing the three persons of the Trinity, and place opposite to them the numerical values of each; they will stand thus:

Κυριος	.	.	.	=800
Ὁ παρακλητος	.	.	.	=880
Ἰησους	.	.	.	=888

and the same 2,568 will be their sum.

Here is a very remarkable association of figures which will itself explain why I have put the second person of the trinity in the third place, and they are reducible on a division by 8 to

100

110

111

the sum of which is 321, which, being divided by 3 produces 107—which number again appears, together with the combination 321, in the following Hebrew sentence:

In the Thirty-fifth chapter of Genesis and tenth verse are the following words $\text{וַיִּקְרָא אֶת־שְׁמוֹ יִשְׂרָאֵל}$ “and he called his name Israel.”

541

346

401

317

317

401

346

541

5) 1,605

3) 321

107

But to return to the number of the motto, *E pluribus unum*, on the obverse side of the seal, and which is equal to 1,071 (observe the recurrence of the 107 in the first three figures), if we add thereto the number of the stars, of the arrows and of the stripes, thus, $1,071 + 13 + 13 + 13$, the sum becomes 1,110, which is exactly ten times the 111, which we may consider the root of the number of the holy name Jesus; but here it is multiplied by 10, the number of the lost tribes of his people Israel, of which Manasseh is one. And this number, 111, is also the value of the Hebrew words, בְּנֵי אֱלֹהִים “the sons of the liv-

18

31

62

ing God,” which we find directly applied to Israel in Hosea, i., 10; and the words כֹּהֲנֵי יְהוָה “Priests of the Lord,”

26

85

in Isaiah, lxi., 6, as applied by that prophet to the House of Israel, produce the same number, 111.

Now we shall return to the Pyramid. We find inscribed on its base the number, or rather date, 1776, which is equivalent to twice 888, that very remarkable combination of eights observable in the name of Jesus; and these eights are also resolvable into 111, which will appear as the basis or root of the full num-

ber, seeing that 1776 is equal to 16 times 111.

Let us now take the other motto, which appears under the Pyramid—"Novus ordo seclorum,"—a new era in the ages. The Roman numerals in this sentence are value for 1,665, which is exactly equal to 15 times 111. Hence, if we place 1,665 under the 1776 (that being the position they relatively occupy on the seal) and subtract we find that the difference between the two numbers is also 111.

I have already remarked that the words "Ye are my witnesses," are addressed to *Israel* by the prophet Isaiah. Now, if we take the Greek words for the "two witnesses," as they occur in Rev. xi., 3, where the words are in the dative case, *δυσὶ μαρτυροῖ* we find them to produce in the total (614+1,051) exactly 1665, which is the value of the motto as well as a multiple of 111.

The following two sentences in their entirety illustrate each the same thing. See Nehemiah, i., 10, "Thy servants and thy people whom thou hast redeemed by thy great power." The Hebrew is value for $586+616+501+494+530+48=2,775$, which divided by 5 produces 555, which is 5 times 111. See also Psalms, xxix, 11, "The Lord will give strength unto his people; the Lord will bless his people with peace." Here the Hebrew words represent $26+77+146+1,110+26+712+401+116+938=3,552$, which is 4 times 888, or 32 times 111.

This concentration of a or multiplication of a number, as it may be five times, eight times, or as now before us, thirty-two times, may be considered as an intensification of that number equivalent to the extended repetition of the figure of which such a number as 111 or 1,111 is composed.

Let us now, ere we close, take again the number 1,110 (which is the sum of the motto, *E pluribus unum*, and the three 13s representing the arrows, stars and stripes) and to it add 43, the the number of letters in the three mottoes, and we produce again the figures 153.

$$\begin{array}{r} 1,110 \\ 43 \\ \hline \end{array}$$

$$1,153$$

One example more—(*e pluribus*) one word from Deut., xxiii.,

49 **אנשר** (the eagle), which is the principal emblem on the seal, and we find its value to be 555, or III repeated 5 times.

I shall now conclude, observing that these are very remarkable numerical coincidences or results, and I have only to ask, was the designing of the two sides of the United States seal a mere matter of chance, and are these figure facts which have been for so long pent up within the various emblems depicted on that seal, to be regarded only as the result of accident or chance? Do they not rather remind us of—and at the same time impart an intelligent meaning to—that text in the Book of Wisdom (xi., 20) in which it is said of the Almighty, “But thou hast ordered all things in measure and number and weight?” And is not this reference to number illustrated very plainly in the thirteenth chapter of Revelation, where we are expressly told that Antichrist will be known by the number of his name being six hundred three score and six? Do not such results as these rather force than lead us to reflect? Do they not, like the wonderful readings of the Great Pyramid, prove to us beyond a doubt that there is something superior to mere chance influencing, if not absolutely controlling and directing, human affairs? Do they not point us to the Bible as a mine of wealth, whether we study its pages to learn the way, the truth and the life, or examine it as a book, the very words and even letters of which declare its inspiration by the Holy Spirit, and set before our understandings the wonderful works of God?

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May, 1885.

OUGHT THE CIRCLE TO BE DIVIDED INTO 360 DEGREES?

Several correspondents of the INTERNATIONAL STANDARD have expressed disbelief that the architect of the Great Pyramids recognized the 360° measure of the circle. Their grounds of disbelief are two-fold: first, such a division cannot be accomplished geometrically; and, secondly, its use has been traced to Babylon. Hence they conclude that it is unscientific, and of profane origin, and consequently it is unworthy of a place in the Pyramid.

Now the general trisection of angles, though an unsolved problem, is not proved to be impossible. Hence the 360° division of the circle, whose construction geometrically depends upon trisection, may yet be found to be scientific. Again, the Babylonian use of 360° may not have originated in Babylon, but not improbably may have been derived from Chaldea whence also sprung the Hebrew race.

Argument by negation frequently involves so great and complex a burden of proof as to be unsatisfactory, especially when, as in this case, it is confronted by strong—may I not say irresistible?—evidence of affirmation; for I cannot see how we may ignore the evidence of the side walls of the king's chamber, upon which the 360° division of the circle is clearly written, or how we can construe that evidence into mere coincidence, when we find it woven into a harmonious system covering the entire Pyramid.

But the number 360, though it may lack geometrical advantage, certainly possesses highly practical arithmetical merit, for it has but to be multiplied by 7, which is the sacred symbolic number for completeness, and this multiplication completes the composite number 2520, which is the least common multiple of all the numbers from 1 to 10 inclusive. Hence 360 has very remarkable capacity for sub-

division, which quality seems to me to be far more important in circular measure than mere geometrical construction.

Lately my attention has been drawn to the Scripture use of the number 360 to denote in prophecy a year of years; also of 7 times 360, or 2520, to denote 'a great week' of 7 years of years. If then "He that sitteth upon the circle of the earth, and the inhabitants thereof are as grasshoppers," (Isa. xl, 22) has, by the mouths of his inspired prophets, declared the orbit of the earth, which measures the year, to be divided into 360 parts, may we not naturally infer that He has recognized, approved and inspired the use of a like division in circular measure generally?

The arguments for and against our hereditary 360° division of the circle sum up as follows:

In favor of 360° :

This division of the circle has eminent capacity for subdivision;

It accords with Scripture analogy;

It has Pyramid testimony that it was of sacred origin.

Against 360° :

Geometricians cannot construct it, and therefore it is declared unscientific, on the assumption that the unsolved trisection problem will forever remain unsolved;—

Archæologists jump to the conclusion that it originated with profane Babylonians, because it is found in the ruins of Babylon.

If this is a true balance sheet, surely the 360° circle is established. If this is not a true balance sheet will objectors please correct it?

J. H. Dow.



EVIDENCES OF IDENTIFICATION OF THE AMERICAN AND BRITISH PEOPLES WITH LOST ISRAEL. A MARVELOUS DISCOVERY!

THE AMERICANS IDENTIFIED WITH LOST MANASSEH—THE BRITISH WITH THE LOST TEN TRIBES—INCONTESTABLE, CONCLUSIVE AND UNMISTAKABLE EVIDENCES—THE DEATH BLOW TO INFIDELITY.

I do not wish to burden the mind of the reader with preliminary remarks. I am anxious to get at once into the thick of the evidences, but it is right to say, that apparently honest objections have been tendered against this identity. Though given, not one of them have supplied a vital, fatal objection; they have all been overthrown. Not one has held its ground, and I boldly and fearlessly challenge the real Bible student to produce one that could do so. To save time, I will deal with the chief of these objections in a closing appendix, and show they are all against the true interests of the Scriptures, divine morality, the truth and the church of God. They can be summed up thus: That the identity has already taken place. That the tribes have already returned. That they returned when the return from Babylon took place. That now there are no lost tribes of Israel, so none to find. That the Jews contain them all, and that in these days there is no distinction of Manasseh from Israel, or Israel from Judah in existence. The answer to these savage attacks upon the integrity of God's sure word of prophecy will be found at the close.

I shall not be understood without very specially emphasizing the distinction of Manasseh and Israel from Judah, which most certainly exists to this day, and which, without recognizing, it would be utterly impossible to understand three-fourths of the entire Bible. Thus:

THE KEY TO THE BIBLE.

THE DISTINCTION OF MANASSEH AND ISRAEL FROM JUDAH.

LOST ISRAEL.

A vast Multitude, Hos. i. 10.
 Two nations before God, Gen. xlviii. 19.
 Lost by their name being changed, Isai
 lxxv. 15.
 An island nation, Isai xlii. 12.
 Their isles Northwest from Palestine, Jer.
 xxiii. 8.
 A nation with colonies, Gen. xxxv. 11.
 With the strongest army in the world, Isai
 liv. 17.
 The most powerful people on earth, Isai xli.
 8-14.
 Israel under a monarchy, Isai xlix. 23.
 King David's sceptre ruling over them, Jer.
 xxxiii. 26.
 Redeemed by Christ—a Christian people,
 Isai xlv. 17.
 The only missionary people, Isai xxxii. 6.
 Liberators of the slave trade, Isai lviii. 6.

DISPERSED JUDAH.

Few in number, Jer. xv. 7.
 No nation, only a dispersed people,
 Jer. xviii.
 Known by being specially marked, Jer.
 xiii. 26.
 Wanderers among the Gentiles, Jer. xv. 4.
 Only a personal inheritance, Jer. ix. 16.
 Without a single possession, Jer. xiii. 19.
 With no army at all, Jer. xviii. 17.
 The weakest folk on earth, Jer. xvi. 13.
 Without any form of government, Jer.
 vii. 34.
 This was taken away from Judah, Ezek.
 xxi. 26.
 Under Moses until the second coming, St.
 Luke xiii. 35.
 A new proselyting people, Isai vi. 10.
 Meted out and trodden under foot, Isai
 xviii. 7.

I give thirteen distinctions because I am writing for the people of America more particularly, and Manasseh is the thirteenth of the tribes of Israel, but I could give one hundred more.

Of course in making reference to the history of America, it becomes necessary to refer to the history of the British, the people in whom the Americans had their origin, among whom their early lot was cast, and from whom by a brilliant war, they declared their independence. I shall show, this war was necessary, that prophecies of God's word might be preserved, so permitted by the will of God. I in no way regret this war, but heartily rejoice in it, and am glad that America carried her success, because thereby we have secured many of our evidences which we should not otherwise have obtained, through which the truth of God's word has become most firmly substantiated.

As the origin of both peoples is the same, coming from a common stock, so the history of both peoples is synonymous to a certain point, and to this day both accept as truth, a Saxon or Anglo-Saxon root. This fact supplies my

Evidence No. 1.—"In Isaac shall thy seed be called."—I claim for both peoples an Israelitish descent. After the first division of this great family, though not immediately; yet it

was ultimately decreed by God, that the promises enumerated in Deut xxxviii, should be vested in Israel, and the curses named in the same chapter, vested in Judah; thus the preponderating portion of the family, consisting of eleven out of the thirteen tribes were called by God to be his chosen people, and to inherit all the blessings promised, and the section so blessed were to be called or named in Isaac. It would be impossible, God's word being true, to identify this people unless named in Isaac, no other nation upon the earth was to bear this name but this branch of the family. In Isaac shalt thy name be called, Gen. xxi. 12. The evidence that we are this blessed Israel, is of course most clearly given by our being named or called SAXONS—Saxon comes from the Hebrew "Saac," which is nothing more than Isaac, the prefix in the letter I being dropped, according to a very common custom of the Israelites to allow the introduction of an affix—in this case the *on*, rendering it Saxon, meaning the "Son of Isaac." So that by calling ourselves Saxons, we are acknowledging ourselves to be the sons of Isaac, thus complying with scripture by being called by another name. Isai lxxv. 15. Gen. xxi. 12. Amos vii. 16. Romans ix. 7. Hebrews xi. 18.

The dictionaries derive the word Saxon from *Seaxa*, *Seaxe*, or *Seaxan*—ultimately arriving at the Anglo-Saxon root *Seax*—a short sword or dagger, and note that it was the distinctive weapon carried by the Saxons. If the makers of dictionaries were always historians they would not have fallen into this error. The short sword was not the distinctive weapon of the Saxons, they were shooters not thrusters, and short swords designated by no root sound like the above antedate by thousands of years the appearance of the Saxons on the stage of history. It is, moreover, far more probable, that if the name *Seax* is generic to this race of people, it was derived from the redoubtable name of the people themselves, who at close quarters sometimes used it terribly upon their enemies, than that, by so extravagant an inversion, it suggested to Saxons a name by which they called themselves! This idea is well expressed by John Pym Yeatman in his exhaustive work on our "Shemitic Origin," as follows: "All German writers, after their manner of putting the cart be-

fore the horse, assert that the Saxons were so called from using the Seax, so the axe, from the Axions the same people." But as shooting was distinctively the warlike property of all the Northern races, and the handling of the short sword, or dagger, strictly Southern and Latin, so to-day, these distinctions are inherited by the very descendants that inhabit these geographical divisions. The Scythians in particular, were such famous shooters of the bow and arrow, and all kinds of darts, that the very word to shoot Scythian is derived from their name. So too, the scythe was the implement of the people, though not by any means an origin of their name. Now the Saxons are, by all historians, admitted to have been the dominant family in the Scythian race, and there are weighty arguments, that would fill volumes, showing that perhaps the word Saxon is elder than Scythian and led directly to it. The sickle was the forerunner of the scythe, and shows how the K sound may be dropped, and so the general family name Scythian, may perhaps be derived from Saxon itself, in some of its infinite varieties, for the letter K. is often found changed to C. and often into X.

In the mouths of the Germans who cannot pronounce *th*, Scythian becomes Syssan, and the Netherlander calls Saxon, Saisen. But the Saxons did not go to Germany to obtain their name,—they are called Saxons and Scythians centuries before the first German was ever heard of.

With regard to the etymology of the word Saxon, Yeatman finally says :—Its history is as follows ; "The Persians used the terms Sacæ and Scythian as *convertible*, whether from a corrupt rendering of one from the other or because the Sacæ, a great tribe of Scythians bordering upon them were so called by a tribal name, (a great question which Persian scholars must determine). Of the fact of the identity of the Sacæ and the Scythians there is not the shadow of a doubt, it is clear that these people called their country Sacasena. It is equally clear that the Saxons of England were the Scythians or Celte-Scythians. Their geographical position in Europe is accurately described by Plutarch, Tacitus, Ptolemy and other authors." Finally in this argument, as the Celts are the Kelts, or Kumbri of all historians of our day and their origin Sacasena, or finally are the

Beth *Kymri*, whom Shalmaneser put in Media, as these were "the Lost Tribes" whom the Biblical historian sent out of Samaria for Baal (*Cumrium*)-worship, it follows that these Scythians as Saxons are none other than a people no longer called in Israel's name but by the elder name of Isaac as the Lord ordained. In most of the eastern languages "sons of" is written "sunnia." It is equivalent to the Scotch "Mac" and the English and German "Fitz"—MacDonald—son of Donald—Fitz Henry son of Henry. So in the distant home of our ancestors Saac-Sunnia meant sons of Saac or sons of Isaac. Stambul is formed of Istambul by the prefix I, and so the Saxon is a direct descendant of our father Isaac. Dr. W. Holt Yates accepts this derivation of the Saxon name as positive, and the Rev. W. H. Poole, D. D. says in connection with it as follows; "It is a little curious to glean from the ancient nations and from the stone monuments of the early times the various forms in which this word is to be found. I will here insert a few from a list of my own gleaned from ancient history, thus: Sons of Isaac, Sons of Saac, Saac-Sunnia, Saac-Suna, Saac-Sena, Saca-pena, Esakska, Sacae-Amysqui, Beth-Sakai, Sunnia-Sakai, Sakai-Suna, Saca-Suna, Sacae-Sunnae, Sackasina, Sachka-Sunnia, Saca-cine, Saka-Suna, Sacas-Sani, Sakas-Saeni, Saxi-Suna, Sach-Suni, Sachi, Sacha, Sakah, Saachus, Saacus, Sacho, Saxo, Saxoi, Saxonia, Saxones, Saxae, Sach-sen, Sacksen, Saxe-sen, Saxone, Saxony, Saxon.

From the *Asiatic Researches*, Dr. Moore quoted in his work, "*The Saxons of the East and of the West*: We are interested to learn that the White Island in the west (England) was in India denominated *Sacana*, from the *Sacas*, or *Sacs*, who conquered that island and settled there at a very early period, from the fact being mentioned in the *Pur'an's* named *Varada* and *Matsya*.

Upon the northern slope of the mountains of Israel, overlooking Damascus, lay the ancient cities of Bashan, and there Ptolemy, called "*Saeca*," a very old town of the giants which Rev. S. Porter in his "*Giant Cities of Bashan*" found named Shuka. This traces the word *Saeca* directly back to the very home where Israel, now Saxons, lived before captivity, and an

examination of an ancient map of Palestine will show at a point south of the Sea of Gallilee, a city named *Scythopolis*. This is but another, but most significant, name for *Bashan*, where these Sacaea dwelt, and just south of it is Succoth, a name as prominent in Scottish history as Saxon and Scythian is in that of all the early settlers of Albion. Strabo says the most ancient Greek historians called the people who lived beyond the Caspian Sea Sacaea. Diodorus says "The Sacae sprang from a people in Media who obtained a vast and glorious empire." Ptolemy derives the Saxons from the Sakai, a Scythian race who came from Media. Pliny says, "The Sakai were among the most distinguished people of Scythia, who settled in Armenia, and were called Saeca-Sani." Albinus says, "The Saxons were descended from the ancient Sacae of Asia." Æschylus remarks that "the Sacae were noted for good laws, and were preeminently a righteous people." Prideaux finds the Cimbrians driven out by the Asaea, who came from between the Euxine and Black Seas, and says that from them came the Angli, who with the Saxons conquered England. Upon the marbles of Nineveh we read that a people called Esak-Sha rebelled against Assyria about 670 B. C. *i. e.* fifty years after the captivity of Israel. Upon the famous Behestan rock Darius placed the history of "Iskunka," the chief of the Sacae, who rebelled against him. Sharon Turner says, "The Saxons were a Scythian nation, and were called *Saca*, *Sachi*, *Saki*, *Sach-sen*."

When Darius invaded Scythia and demanded earth and water as tokens of submission, the answer of our Saxon ancestors was sent back in the form of a most significant present. They sent him a bird, a mouse, a frog, and a bundle of arrows. It meant, "Fly into the air like a bird, hide in the earth like a mouse, or dive into the water like frogs, lest our arrows prove your doom. Worn out and struck with this eloquent message, the army of Darius retreated. This message had an Israelitish and a British flavor, and as an early expression of the "Monroe doctrine" was doubtless suggested by some of the descendants of ever warlike Ephraim and Manasseh.

Finally, upon the head of Iskunka, the Saxon, as portrayed

upon the Behestan rock 500 years *before* Christ, is an exact representation of a Greek cross. Upon the obverse of a penny of Alfred the Great, 1,000 years old, occurs its perfect counterpart, and Palgrave, in his history of the Anglo-Saxons, gives a drawing of a Runic ring at least as old as 200 years after Christ, bearing a similar device. May not this *pre-Christian* cross have been an emblem of the peculiar blessing ceremony of Ephraim and Manasseh, at which their father Israel so significantly crossed his arms above them? For it is in *that sign* that they have conquered most, and from it have derived a *newer* name than even Saxons. It was under their generic name of Saxons—thus in Isaac's name—that Israel was actually "called" to Christianity, and when we consider that Isaac was, of all the patriarchs, preeminently the type of him who, later on in Israel's history, was actually offered up, we see additional cause for astonishment in the fastening of this name upon the lost tribes, unto whom alone the Redeemer expressly states he was, in his earliest mission, sent.

In all study of truth one finds reflection answering back from every side, and so in the various derivations of the general family name "Saxon," each one looks backward at lost Israel, yet onward to God's people. For instance, some have with most interesting arguments derived the name "Saxon" from the Latin word Saxum—"a stone," and regarded it as given to them by the Romans, because they were skillful slingers. It is needless to say that this derivation cannot be correct, for the race was named so long before the Latin language had crystallized enough to compass it. It is moreover doubtful if the Sacasena were ever known to Rome as such dreaded slingers much before the fall of the pagan empire, and its overflow by streams of Goths and Huns, and Vandals. Yet there is a rhythm in this derivation that is most appropriate. It is just at this later time that the then fully dominant Latin language made the final alteration in the etymology of the word, from its ancient "I saac sunnia" form to its present Saxon one, which certainly is the result of Latin use and impress. Let us therefore examine it in the light of what the prophecies then had in store for Rome from out of Israel. Rome was the last of the four

great empires that in the dream of Nebuchadnezzar formed the image of Gentile sway. They all arose together, as the chart of history will show, "but in the days of these kings," says Daniel, in his translation of it for the king, shall the God of heaven set up a kingdom which shall never be destroyed." This was "Israel" then at that moment, 580 B. C., escaped from Media, and on her progress westward, and in due time to come across the flank of the Roman empire. In the king's vision he had seen until behold a stone had been cut out without hands which smote the image on his feet (Rome in her decay) and broke them to pieces. And after the pounding into dust the whole fallen image, the king's vision had been astounded at the growth of this little stone into a great mountain till it actually filled the very earth itself. It is a part of the irony of fate—kismet—that has ever followed Rome, that when she puts her seal upon history she never fails to do so in a manner that condemns herself, and acknowledges the God of Heaven. This is well known to those who are familiar with her history, and its minute correspondence with God's prophecies about her. Hence, if to the Romans of those days, when they first began to feel the presence of "the fifth empire," as it swept across their north to its appointed place in the little stone cut out of Europe, if to Romans of those days the name of Saxon did imply a derivation from the root Saxum, (a stone) they did but bear a tacit testimony for Israel, for it was to her, and to her sons—Saxons—sons of the stone kingdom, to whom God himself who led them by her, forced a recognition so significant. These Saxons were then pouring westward to unite with David's throne. For when Nebuchadnezzar dreamed and David stood before him, the Almighty had already set the throne of him who slew Goliath with a stone upon the islands of the west, and with its transfer thither had removed its actual seat, Bethel, the witness between God and Jacob in the coronation stone of Israel to the land of which it is pledge of God's protection still.

Evidence No. 2. — "The Saxons traced to Media."—This historical research is important, because it proves that the Saxons came from the very region where Israel was carried into captivity. Sharon Turner in his valuable work, the "Anglo-Sax-

ons" (vol. I page 93-102.) speaking of the great waves of emigration from Asia into Europe says: "It is peculiarly interesting to us, because from these branches not only our own immediate ancestors, but also those of the most celebrated nations of modern Europe, have unquestionably descended. The Anglo-Saxons, Lowland Scotch, Normans, Danes, Belgians, Lombards and Franks, have all sprung from that great fountain of the human race, which we have distinguished by the terms Scythian, German or Gothic." Herodotus says: "The first scenes of their civil existence, and of their progressive power, were in Asia, to the east of the Araxes. Here they multiplied and extended their territorial limits for some centuries, unknown to Europe." Diodorus says: "That the Scythians, formerly inconsiderable and few, possessed a narrow region on the Araxes; but, by degrees, they became more powerful in numbers and in courage. They extended their boundaries on all sides; till, at last, they raised their nation to great empire and glory. In the course of time they subdued many nations between the Caspian and Mæotis, and beyond the Tanais. In the time of Herodotus, they had gained an important footing in Europe, and had taken a westerly direction." Sharon Turner speaking of the Saxons as a Scythian Tribe, says. "Of the various Scythian nations which have been recorded, the Sakai, or Sacae, are the people from whom the descent of the Saxons may be inferred, with the least violation of probability. They defeated Cyrus, and reached the Cappadoces on the Euxine. That some of the divisions of the people were really called Sakasuna is obvious from Pliny; for he says that the Sakai, who settled in Armenia, were named Sacassani, which is but Saka-Suna, spelt by a person who was unacquainted with the meaning of the combined words. It is also important to remark, that Ptolemy mentions a Scythian people sprung from the Sakai by the name of Saxones."

Of course these extracts become invaluable, because enabling us to call to our aid, the great standard Classic Historians who most undeniably prove for us that our own forefathers came from Media, the very district where the tribes of Israel, called in Isaac, were carried captive, and traced to that region bearing this identical name. It is enough to remind the reader, that

Manassites, as the great ancestors of the American people were there, because both the halves of this tribe were carried into captivity to this very district.

The Rev. T. Thomson says: "The term 'Saxon' was certainly applied in a very general sense to tribes who were separate, though they had sprung from the same stock at no very distant period." This is not to be wondered at, because it was an institution of the Israelites to keep their different tribes bordering to each other, yet entirely separated, being forbidden even to intermarry in the tribeships, and the custom would be preserved in these days, because long afterwards, the Apostles found them high in dispute about their genealogies, showing that their customs had been preserved. Strabo says of these Saxones that "the Sacae got possession of the most fertile part of Armenia, and though a wandering colony of Nomades, they were an eminently righteous people." Goldsmith says: "The Saxons were a brave people, who for strength and valour were formidable to all the German nations around them, and were supposed to be more than a match for the gods themselves. They considered each other as 'brethren and equals' thus following the teaching of Moses." Ye children of Israel shall not rule one over another with rigor (Lev. xxv. 46). They permitted every wayfarer to pluck as he went along, three fruits from a tree, or three sheaves from a field, or three fish from a pond, whence came the saying "three are free," and Tacitus says: "No nation was ever more liberal and abounding in social feasts and deeds of hospitality. "We must be thankful for the aid of Homer, Strabo, Herodotus, Diodorus, Pliny, Ptolemy, Tacitus, Josephus, Goldsmith and others for proofs.

Evidence No. 3.—"Media not their birthplace." Of course the historical search after lost Israel receives conclusive evidence by finding our people named in Israel because no other nation upon the earth but that of lost Israel was to be so named. Again this conclusive evidence is intensified in the fact of our people by indisputable authorities, being traced by the thread of history to the very district where lost Israel was carried into captivity, and the two grand evidences becomes materially added to and most substantially confirmed by the

clear discovery of this important fact that this district of Media was not the original homestead, birthplace or cradle of these Saxons, our veritable forefathers. This discovery is an invaluable link in the chain of evidence. Palestine was the adopted home of the Israelites, and of course when they were carried captive into Media they were away from this home. Therefore Media could not have been their cradle. So that by tracing our forefathers into Media and then most surely finding out that this was their cradle, that as a people they had been imported from some outlying region into that country, we gain a very important point. Direct testimony to this effect is given by Homer, Strabo and Herodotus. This latter historian tells that these Saxons, the forefathers of the great British and American peoples, first made their appearance in Media about the seventh century before Christ. Strabo the historian gives the same testimony, but Homer states that it was in the eighth century B. C., the two statements making very little difference, but valuable because allowing us to strike the mean resulting in the fact that it was between the seventh and eighth centuries before Christ; bringing out the remarkable fact that lost Israel was carried into Assyrian captivity 721 B. C., *i. e.*, between the seventh and eighth centuries B. C., the time when they first made their appearance in Media, which is the identical time when our great forefathers were traced to this identical neighborhood. Really it might well be asked what greater evidence could we want to prove that our Saxons and lost Israel are identical with each other?

Evidence, No. 4.—"Dan found in Ireland B. C. 721."—In the many historical evidences of the identity of the American and British peoples with lost Israel, perhaps none is so consummate as that of being able to trace by the pages of history, the tribe of Dan to Ireland. The world has never contained two tribes of Dan at any time. When Israel went into Palestine under Joshua, too great a portion of the land was given to the tribe of Judah, to the detriment of some of the other tribes. Jos. xix. 9. This necessitated Judah to give up much territory originally assigned to her, and Simeon, Dan and other tribes were thus provided for. The portions given to Dan and Simeon were

on the coast, west of Judah, and were overlapped by the portion given to Benjamin. This afterwards served as a great protection to Dan, because when the revolt of the tribes took place, and the existence of two distinct kingdoms was established, Dan's portion was within the boundary originally allotted to Judah, so to make war with Dan, would have involved making an inroad through the kingdom of Judah, which would have meant war with both kingdoms, this was Dan's protection. True, Dan's portion was small for the tribe, so we read: "The coast of the children of Dan went out *too little* for them, therefore the children of Dan went out to fight against Leshem, and took it, and smote it with the edge of the sword, and possessed it, and dwelt therein and called Leshem, Dan, after the name of Dan their father." Jos. xix. 47. This was a small possession in the north of Palestine; whereas the main tribeship was in the south, and this division instructs upon two important points, showing Dan had a custom of altering the name of a conquered district, and placing its own name thereon instead, and also that as a tribeship it would have been very difficult for the King of Assyria to get at, because to try, would not only have implied warfare with the kingdom of Israel, but with the kingdom of Judah, with whom he was at peace. This in conjunction with the fact that Dan had a coast portion, and were renowned shipmen throughout Israel, would have given to Dan every desired facility to escape. They were down south, surrounded by Judah, had the coast, had the ships, and had most valliant shipmen, and escape they did, there can be no doubt of this. History declares this fact. It is unmistakably written upon the Irish page of British history. By consulting Keatinge's 'History of Ireland,' also 'The Annals of Ireland,' by the four masters, also Dr. Warner's 'History of Ireland, will be found, that the tribe of Dan settled in the north of Ireland under the name of the Tuatha de Dannans, for Tuatha is Irish for "a tribe," and this tribe was Dan's. Not only do these authorities declare this, but also state, as in Cox's *Hibernia Anglicana* that the very year of the arrival of the tribe of Dan into Ireland, was B. C., 721. This was the very year of the Assyrian captivity, proving that Dan

did escape, as he could so easily have done, and also have taken Simeon under his protection, for all the tribes did not go into captivity. We read in the scripture that some did escape, Isai. lxvi. 19., and these very escaped ones were directed by God, to Tarshish, which is recognized as the British Isles or "The Isles afar off," *ibid.* These very "isles" were to become the common meeting ground of all the other tribes. It was here that Dan renewed his old custom of altering the names of places to affix his own. (Judges, xviii. 12.) In Ptolemy's map of Ireland, we find Dan's-Lough, Dan-Sowar, Dan-Sobairse, Dan's resting place, Dan's habitation, and Dan-gan castle (the birth place of the Duke of Wellington,) indeed Dan's mark is still to be found in many parts of North Ireland. But then there were the small body of Dan's colonists who in the north of Palestine altered the name of Leshem into Dan, These did not escape, they were too well advanced in the teeth of the enemy, and they went into captivity, to eventually find their way, by slow progress along the northwest passage into Europe, and to the Isles, through Denmark, or Dan's Mark, and becoming known to us as Danes; their marks are also left behind them in the Dan-ube, the Daniester, the Dan-au, the Dan-inn, Dan-tzig, Dan-enbury, Dan-et, the Dan-aster, the Dan-dari, the Dan-er, the Don, the Dacia, the Davi, the Be-davi, the Betavia, the sea of Moses, and the country of Moses, or Morcia, the Dan-ric Alps, etc., etc., etc.

We protest against the idea of striving to build up a theory we are with great simplicity simply stringing a narration of facts. The identity, as stated so far, is too complete, too cumulative, ever to allow its being a theory, and these new touches merely become corroborators of Scripture, they throw jets of beauty lights upon the word of God, they give tone and force to Bible narrative.

It is nothing more than the overtures of history gracefully walking into companionship with God's holy word, showing how prophecies have been fulfilled giving to our peoples the grand position of explaining, illustrating, harmonizing and living out the divine programme in the consecutive order of events in the veritable histories of our two nations.

Then we trace Dan into Ireland and the British Isles, which

at once become the meet of the tribes, because by tracing one tribe, the pioneer tribe, we virtually trace the whole. It is Christ that describes lost Israel under the characteristics of sheep. It was He that said: "I am not sent but unto the lost Sheep of the House of Israel." Matt. xv., 24. It was He that instructed: "Go not into the way of the Gentiles, and into any city of the Samaritans enter ye not; but go rather to the lost Sheep of the House of Israel." S. Matt. x., 6. What is a great characteristic of sheep? Do we want to turn a flock into some rich pasture land? It is enough to drive one, only one, through the gateway and all the rest will follow. Do we want to drive them into a slaughter house? It is enough to drive one through the doorway and all will follow. God willed that His chosen sheep should find new pastures "in the isles afar off," should there renew their strength, reunite with each other; the whole becoming once more banded together as "a nation. Jer. xxxi., 36. And it shall be seen that it was enough to pioneer the tribe of Dan into the British Isles, where all the other tribes would follow, prophecy thus becoming fulfilled and scripture beautifully explained.

Evidence No. 5.—"Canaanites settled in South of Ireland." Lost Israel could not be traced without the testimony of history. They are people of many parts, designed by God to accomplish many works. Each branch of their work is the conception of a prophecy. All prophecy is sure; therefore all their allotted work must have accomplishment. Prophecy to be fulfilled must tell its tale through history. The identification of lost Israel means an overwhelming evidence of history. The whole testimony is history. We cannot divine the fulfillment of one prophecy without a record on a page of history. It is this that makes the identification so sure. There is no speculation; the whole thing is worked out mathematically correct, with the severe requirements of a geometrical problem. It is so with the identity of Israel. To find Israel you have to find a people complying to all the prophecies of scripture given to Israel to respond to. Not one must be lacking. The Americans and British being lost Israel, it is required that every event and circumstance predicted to surround Israel when in exile, should

surround these. If one prediction is not fulfilled in them required to have been accomplished by this time, there would most certainly be a flaw in the identity, and it would be untrustworthy. We rejoice to know that there is no such flaw, to wit: This identity could not be proved unless both Britons and Americans were troubled by the Canaanites. This is a *sine qua non*. All scripture must be fulfilled or there would be something wrong about the scriptures, which is simply impossible. God instructed Israel through Moses that when they entered the land of Canaan they were to make no covenant with the Canaanites nor to show mercy unto them, Deut. vii. 2. They were to be driven out of the land. He instructed Israel thus: "Ye shall destroy their altars and break down their images and cut down their altars, and burn their graven images with fire," verse 5. God promised if they obeyed these commands he would come to their help and expel the Canaanites from before Israel and drive them out of their sight. That Israel should possess their land, "as the Lord your God has promised unto you," Jos. xxiii. 5. Disobedience to these commands would meet with God's displeasure if not obeyed. Then "know for a certainty that the Lord your God will no more drive out any of these nations from before you, but they shall be snares and traps unto you and scourges in your sides, and thorns in your eyes," Jos. xxiii. "But if ye will not drive out the inhabitants of the land from before you, then it shall come to pass that those which ye let remain of them shall be pricks in your eyes and thorns in your sides, and shall vex you in the land wherein ye dwell," Numbers xxxiii. 55. Scripture history testifies that Israel did disobey. That they did not comply with their instructions. That God did call them to account and through His angel reminded them of what He had commanded them, saying: "That ye shall make no league with the inhabitants of the land. Ye shall throw down their altars; but ye have not obeyed My voice. Why have ye done this? Wherefore I also said. I will not drive them out from before you, but they shall be as thorns in your sides, and their gods shall be a snare unto you. Israel well understood the effect of

this verdict as launching them into overwhelming trouble, because we are told in the next verse: "And it came to pass when the angel of the Lord spake these words unto all the children of Israel, that the people lifted up their voice and wept," Judges ii. 2-4. Then scriptures prove that the after life of Israel and specially so when they reached the time of their exile, would be a life well seasoned with trouble from these Canaanites; and in order to bring forth proper evidence to the truth of the identity of the British and Americans with lost Israel, it is needful to show that both these people are troubled by them. For these proofs we are indebted to Irish history. It must be said that when Israel went into the land under Joshua, they commenced the work of driving out the Canaanites in right earnest. To some extent Israel succeeded in the driving out work. Joshua x. 40-43. The early chapters of Joshua narrate many victories, but to a large extent did not succeed. Judah could not drive out the Jebusites. Joshua xv. 63. Ephraim could not drive out the Canaanites. Joshua xvi. 10. Manasseh could not drive out the Canaanites. Joshua xvii. 12. Judah did not drive out the valley people, Judges i. 19. Benjamin could not, verse 21. Zebulon could not, verse 30. Asher could not, verse 32. Napthali could not, verse 33. Dan could not, verse 34.

The Canaanites, who were driven out when Israel first settled in the land are traced by history through Spain into the southern part of Ireland. Along their journey they cut out an inscription on a huge rock: "We are 'Canaanites, who have fled from Joshua, the son of Nun, the robber.'" In the process of time, when Israel was carried into the Assyrian captivity and the land became depopulated, the remainder of the Canaanites disappeared; and they too are traced to south Ireland. The Canaanites were Phoenecians. They had long known the existence of the British isles. In the early days of David and Solomon, they are known to have traded along the Cornish coast. In fact Cornwall was in large part peopled by them, while the main body was located in the south of Ireland, called by them "Ibernae," the farthest off land. This district was also known to them by the Phoenecian word "Yarish," or the land

of the sun setting, America being unknown to them in these days. It was also called Earsland, or Ireland, Yarish meaning Irish. The very ethnology of the people claims for them Canaanitish descent. The Irish language is identical with the old Phœnician. The alphabets of each are identical; each containing sixteen letters, every letter being identical. It is the same in grammatical construction and idiomatic texture. The only present variation is the introduction of one new letter, the letter P. This letter is not found in the old Phœnician. To produce its sound three letters were always employed; therefore P was introduced as a modern convenience, easy to appreciate. It is from Phœnician that the well-known term "Fenian" is derived, opening up to us a volume of meaning. Whoever uses this word in these days without associating it with a race of troubles and with dynamite? By it our train of thought is at once carried to the diabolical destruction of public buildings to the fiendish aim at human life, and the cowardly spilling of innocent blood. But why ornate description? The root of the matter is better explained in the Scripture. language of "Thorns in the sides," or "Pricks in the eyes." The very brutality creating an evidence to our identity with Israel, and instructively showing that literal prophecy is indeed vested with literal meanings. Then away with the dishonesty of spiritualising away the "more sure word of prophecy." This treachery of the pulpit has never helped the noble and God given-work of conversion. To insult our intelligence is not the way to win souls for Christ. To attempt the cant of making out that God does not mean, the meanings of the words he employs, is to belie the Bible, to hide the truth, to commit iniquity. Saxon! "Arise! Shine, for thy light has come." Protest against this liberty taken on the part of our preachers with our Holy Scriptures. God does mean what he says. His words are plain; are now proved historically true by hundreds of plain evidences. Therefore set yourself against the crime of spiritualizing away the real meaning of literal prophecies. Be no longer deceived. Stamp out the vulgar deceit palmed upon you by public teachers in their claim that the prophecies of the Bible can only be understood by their interpretations. This

is pure priestcraft, an abominable delusion ; and the sooner the deception is banished from our midst, the easier will be the work of saving souls for our Lord.

EDWIN HINE.

"THE TWO WITNESSES."

A CRITICISM BY WM. H. SEARLES.

This is the title of a pamphlet prepared by Mr. R. Courtenay, of Bombay, in which he attempts to confirm the theory proposed by Mr. Robert Menzies, and adopted by several other writers. The theory regards the Grand Gallery of the Great Pyramid as a historical or prophetic chamber, beginning at the north end with the beginning of the Christian era, and measuring thence one pyramid inch for each year onward.

As this method of reckoning brings us to the face of the great step, near the south end of the gallery about the time of the battle of Waterloo, Mr. Courtenay, with true British patriotism, assumes this event to be indicated by the step, and uses it as an origin from which to reckon other dates in history and other points in the chamber. The entire force of the argument depends on the numerical coincidences which he can establish between years and inches. The object of the present paper is to examine into the merit of these coincidences. As the author has selected the west side of the chamber for his comparisons, we will confine our attention to this side.

Starting, then, from the date of the battle of Waterloo, June 18, 1815, the first historical event to which our author refers is the birth of our Lord, which he thinks is indicated by the north wall or beginning point of the Grand Gallery. He calculates the distance along the sloping floor from the step to the north wall as 1814.161616 pyramid inches, and translating inches into years, he derives the interval of 1814 years, 59.03 days, which deducted from the date of Waterloo, places the Nativity at the date of April 20th, A. D. 1. (He does not give the hour and minute, as he might have done if his decimals are to be de-

pended on.) But how does he obtain the exact number, 1814.161616? He tells us, from the "true vertical height of the foot of the step above the entrance of the gallery, viz., 803.802745, and the true angle of inclination, viz., 26°, 18', 0". But how does he ascertain the height, 803.802745? By dividing the number 2480.408235 by 3 and subtracting 23 from the quotient. Now what the number 2480.408235 is he does not tell us exactly, except that it is nearly like 2480.56942, "which is the number of days in seven lunar years." Or we may obtain the height, as he shows, by subtracting the face of the step, 36.197255, from the height to the top of the step from the beginning, which he calls 840.

Now the number 36.197255 is obtained by taking 29.5305885, "the exact number of days in a lunar month," and adding 6.666666, the last number being the difference of 840 and 833.333333, and the last being $\frac{2500}{8}$. The 2500 is a purely arbitrary number.

Reducing the above process to a formula, we have:

$$\begin{aligned} 803.892745 &= 840 - (29.5305885 + 840 - \frac{2500}{8}) \\ &= \frac{2500}{8} - 29.5305885 \end{aligned}$$

and

$$1814.161616 = 803.802745 \div \sin. 26^\circ, 18'.$$

So the length is obtained from purely arbitrary sources after considerable calculation. For our part we prefer to go directly to the best authorities who have actually measured the length, and compare their results.

The distance, then, from the step to the north end of the gallery is as follows:

West side, according to Piazz Smyth (L. & W., p.

77, vol. 2)..... 1815.6

Total length of gallery.....1883.00

Less the slope length of step68.04

leaves for the distance from step to N. end.....1814.96

There is a discrepancy here of..... 0.64

But adopting 1815.6 and deducting $\frac{1}{10}$ of 1 per cent. to

reduce to Pyramid inches, we get.....1813.88P

Flinders Petrie gives on the east side.....1815.50

And for the whole length of gallery.....1883.60
 Deducting slope length of step..... 68.40
 Leaves (with a discrepancy of 0.3).....1815.20
 Smyth makes the west side 1.70 greater than the east
 side. If we add 1.70 to Petrie's east side, we get
 $1815.50 + 1.70 \dots\dots\dots 1817.20$

And deducting 1.82, leaves.....1815.38P

It is hardly fair to average this result with the former, as Petrie did not measure the west side, so we have 1813.88P instead of $1814.16 +$ of our author for the distance from the step to the north end measured on the slope. But this represents 1813 years, 321 days, which taken from June 18, 1815, brings us to August 1, A. D. 1., instead of April 20th of that year. In other words, the difference between $1814.16 +$ and 1813.88 is 0.28 inches, or 103 days. We thus see how a small discrepancy in the measurements makes a wide variation in the dates, and this should warn us to seek the measures from given dates rather than to determine exact dates from the best of measurements.

As the date of the Nativity is veiled in uncertainty we cannot prove by it whether the date of Waterloo is correctly taken at the step or not; we therefore pass to the consideration of the next event, the crucifixion of our Lord. The author argues that this took place precisely 33 years to a day after the Nativity, and that it is symbolized by the opening in the west ramp, the center of which he is misled by other writers into calling 33 inches distant from the north end of the gallery. Now Smyth states distinctly, that the *horizontal* distance from the north wall to the two sides of the opening are respectively 21.3 and 49.3, and that the distance to the center of the well is 35.3 inches. Also that the distances from the north wall measured *on the slope* of the gallery are 25.5 and 54.3, and to the center 38.4 inches. Mr. Petrie confirms these measures substantially. So that if the north wall symbolizes the Nativity the center of the well symbolizes some event that occurred 38.4 years thereafter, and not the crucifixion. Mr. Petrie says of this opening, "it appears to be so rough and so evidently utilitarian (for the exit of work-

men,) that it is not worth while to publish more complete measures than those of Prof. Smyth."

The author next invites our attention to the eighteenth centenary of the martyrdom of St. Peter, which was celebrated in Rome, June 29th, 1867, or 52 years 11 days after Waterloo. This calls for a measurement of 52.03 inches from the step southward, which the author claims is the distance along the floor line produced from the foot of the step to the level of the ramp. Now the height of the ramp, west side, at the step is 23.62 according to Petrie p. 75 (mean of two good measures) or 23.6 P., and this divided by the sine of the angle of the floor, which is $26^{\circ} 17' 40''$ according to Smyth's elaborate observations gives us 53.27 inches, or an inch and a quarter larger than the 52.03 required, thus indicating a time of 15 months after the centenary occasion. Moreover the point now reached is an imaginary one in the heart of the great step, and cannot have any symbolic signification whatever. Even if the measurement had proved correct, to tally with the date, it would not have proved the propriety of fixing the date of Waterloo at the great step, because the point reached is in no sense a mark left by the builder of the Pyramid.

Now, most unfortunately, the author uses this point, and date of June 29th, 1867, to reckon back from for several centuries, to the anointing of Charlemagne, December 28, A. D., 800. He does not claim that there is any mark in the gallery to indicate this event, and it proves nothing in relation to Waterloo.

The author next goes into several pages of calculation to find that a plumb line dropped from the south end of the ceiling would touch the step at a distance of 55.08393 inches south from the face of the step. This translated into years and added to the date of Waterloo brings him to July 18th, 1870, the day on which the infallibility of the Pope was proclaimed at Rome. Now this might seem significant were it not for the fact that Petrie's actual plumb line struck the step 21.25 north of the south wall by actual measurement or $(61.52 - 21.25) = 40.27$ inches, or 40.23 P., inches from the face of the step. This gives us a date more than 15 years prior to the proclamation of

infallibility, consequently this event proves nothing as to the correctness of the "Waterloo theory."

The author now undertakes prophecy, and supposing the floor line to be produced southward till it emerges at the top of the step he makes the date at the point of emergence, Feb. 27th, 1897, which he predicts will be the time when the "Times of the Gentiles" shall be fulfilled. This may be so, but at the present date it proves nothing about Waterloo, and the step. We remark in passing, however, that from June 18th, 1815, to Feb. 27th, 1897, is 81 years 254 days the equivalent of 81.696 P. inches, while the distance through the stone along the line of the floor produced is $(35.8 + \sin 26^\circ 17' 40'') = 80.815$ P. inches. 35.8 is the height of step, as Mr. Petrie found by two careful measures on the west side. Prof. Smyth, however, quotes 36.2 inches = 36.19 P. inches at the same place, which would give a result much nearer Mr. Courtenay's figure. The point of emergence is another imaginary point, to be found by calculation only, and although it lies on the floor of the passage leading to antechamber, there is nothing to mark the spot so far as we are informed. The visitor would never remark it as a monument or prediction of anything.

The author here takes leave of the Pyramid and we need not follow him further, except to say that he uses the date of Feb. 27, 1897, to reckon back from; thus deducting the 1,260 years mentioned in Daniel gives the year A. D. 637 in which Jerusalem was taken by Omar; and deducting twice 1,260 or 2,520 years gives the year 624 B. C., the date of the fall of Assyria and the rise of Babylon. It is not claimed that these events have any symbol in the Pyramid, hence its prophetic character is not established by them.

In conclusion, we regret that so much labor as the author has evidently bestowed on this subject should prove fruitless; for it seems to leave the theory, which is certainly a fascinating one, no better confirmed than before.

The only satisfactory method of solving such a riddle, if it be capable of solution, is to prepare a schedule of all prominent marks in the gallery with their distances, also a schedule of important events in history with their dates and then compare the

two without alteration on different theories as to the starting point, until a theory can be found that will reconcile one schedule with the other.

ABSTRACT OF A PAPER READ BEFORE THE
AMERICAN ORIENTAL SOCIETY.

At the last meeting of the American Oriental Society (May 6) a paper from Mr. Cope Whitehouse was read, which explains Genesis xlix. as referring to those parts of the Heptanomis which the Egyptian Jews believed to have been occupied by the descendants of the twelve patriarchs at the time of the Exodus. He is strongly opposed to the theory of pyramid metrology, and this evidence therefore has all the weight which attaches to the admission of an opponent reluctantly confirming opinions with which he has no sympathy. The great difficulty with which the Pyramid Metrologists have been obliged to contend lay in the separation of the pyramid from the land of Goshen. In "Christian Thought," however, Mr. Cope Whitehouse had shown that there was no agreement among scholars as to the part of Lower Egypt occupied by the children of Israel. The most distinguished scholars flatly contradict each other. Micæhlis and Rosenmüller put it beyond the Suez canal to the east. Mr. Poole and Mr. Naville make it the valley of the Fresh Water canal. Professor Paine and Canon Rawlinson suppose it to be near San el Hagar. The Dean of Canterbury and Dr. Ebers bring it as far south as Heliopolis or Cairo. But Jablonski, a very learned German Egyptologist of the last century, in a posthumous treatise, "De Terra Gosen," declared that "from all time, it had been believed in Egypt that Goshen was the fertile province of the Fayoum to the south-west of Cairo, including a strip of the Heracleopolite Nome." This is precisely the region marked by pyramids. It is "in the midst of Egypt" where Joseph's body was placed, where the Israelites dwelt. The Ishmaelites are descendents of Abraham. They

would preserve in Arabia the same traditions as the Jews in Palestine. The wandering in the wilderness and the battles with the Amorites would be events which would leave permanent records in their history. When these Arabs conquered Egypt in the Seventh century, they would naturally restore the old Semitic names and substitute them for the Greek. The four provinces of middle Egypt are Gizeh, Beni-Suef, el Fayoum and Minieh. The Bahr Jusuf or Canal of the Patriarch Joseph, which the Encyclopedia Britannica says was called after Saladin, although it is mentioned by that name centuries before Saladin was born, starts from *Siut*-Lycopolis, and empties into the Birket el Qeroun. The pyramids are all in, at, or near this region, between the canal of Joseph and the neck of the delta.

In this paper it is suggested that the blessing of Jacob refers to "the latter days" in Egypt, while the blessing of Moses (Deut. xxxiii) describes the prosperity in Palestine. The imagery, under which Benjamin is represented as a wolf, Joseph as a branch, Judah as a lion are the heraldic emblems subsequently adopted by the polytheistic Egyptians. The Hyk-Sos or lords of *ta-She*, the Fayoum, were the allies "the shepherd, the stone (or support) of Israel." The children of Jacob were admitted into the island-fortress protected by "the arms" of Joseph, and the "deep" lake Mœris, which lay under the everlasting hills. But it was Joseph who had aided Pharaoh to accomplish this great work. It was he who redeemed el-Fayoum the Marsh, and made it *Pithom*, the West. When the king arose which knew not Joseph, the Israelites occupied a large part of the adjacent valley: "The land was filled with them." Zoan was not at San el-Hagar, but another name for Memphis or Tanis Magna. Comparing the names of the Patriarchs with the Arabic names of these canals and pyramids we find: *Minieh* Benjamin, *Bahr Jusuf* Joseph, [*Menas-she* (Herodotus) Manasseh, and *Beni Suef* Ephraim,] *Lisht* Naphtali, *Dashur* Dan [GAD] Asher, *Saggara* Isaachar, *Zauet el-Arrian* Zebulon.

"Simeon and Levi are brethren," the *Haramin* or brother pyramids. From the lion of Judah, H. O., the Sphinx the road still leads to the Fayoum, once famous for "the choice vine." At Gizeh were the royal pasturages of "the shepherd Philition

(Herodotus). "His teeth are white with milk." The paw of "the strangler" was on the necks of the subject Egyptians. On the height of Abu-Roash Reuben was "the beginning of strength." Saida or Zidon was a haven on the Nile. Issachar saw that Memphis was "*Men-Nofer*" the good abiding place, and he abandoned his independence for "the pleasant rest" within the walls of the metropolis. Joseph is a fruitful bough by the lake Mœris, whose branches run over the wall of the Libyan hill, through the gorge past the two pyramids of El-Lahun and Howara (Avaris). The great bow of the lake, ninety miles long, abode in strength, and the blessings of the heaven above fell as dew and rain upon the vineyards and olive trees which were the crown of the head of him that was separate from his brethren. "Benjamin shall raven as a wolf." The canal of Minieh starts at "Wolf-town" in the east,—"at evening" in the west—it divides the spoil, or as the septuagint puts it, gives to the west its nourishment.

OUR WEIGHTS AND MEASURES.

Much fault has been found with the weights and measures in use by the English speaking people, and which have been handed down from times so ancient that we do not know from whence they came, or by whom they were devised.

It has even been proposed to set them aside and adopt those of more recent invention. After considerable investigation I find that our weights and measures had a good scientific origin, and that probably they were once more perfect than at present, and that with a little adjustment they can be restored to their original harmony. The inch is at the foundation of all our measures, and consequently of our weights.

By multiplying the inch we have three chief measures; one of 12 inches; one of 24 inches and one of 36 inches, all of which admit of being evenly halved and quartered.

This even division is a very useful quality in practice, and is

extended all through measures and weights. The favorite two-foot rule can thus be divided three times.

The inch is a beautiful little measure, the most convenient and most used of all. The measures of weight and capacity are not so satisfactory. The ounce, (once) which is our unit of weight, is also our unit of capacity, In avordupois weight a fluid ounce weighs an ounce. It is equal to $1.732+$ cubic inches, which is divided into 437.5 grains, and one grain is $= .00396$ cubic inches. The number 1.732 is the square root of 3.

The ounce troy is $= 480$ grains, each grain being $.00376$ cubic inches.

The apothecaries' fluid ounce is $= 1.8048$ cubic inches., divided into 455.6 grains of $.00376$ cubic inches to the grain.

This does not agree with apothecaries' weight, which has 480 grains to the ounce.

It is not only the variety of ounces of weight and capacity, but the various number of grains contained in them, and even of the size of the grains themselves that make our tables confusing.

The ounce avoirdupois which is at once a unit of both capacity and weight, would seem to be the most suitable point about which to adjust all other measures. For measures of capacity the cube is the most natural and best suited for a standard form, and I think that in former times there was such a system connected with our measures of length.

Now the ounce of 1.722 cubic inches is not a cubic measure. But there was once an ounce derived from our cubic foot that fulfills all the conditions required.

The cubic foot consists of 1728 cubic inches, and the ounce of 1.728 cubic inches is just its thousandth part. This ounce is also a perfect cube of 1.2 inches to the side. The ounce being a cube, it is easy to make cubic measures out of them.

The drachm, being the eighth part of an ounce, is a cube also of $.6$ of an inch to the side.

The half pint is also a cube of 8 ounces, and the pint is two of these cubes set together.

The half gallon is a cube of 64 ounces, and the gallon is two of these cubes set together.

The pint weighs just one pound, and the gallon weighs eight pounds.

An avoirdupois gallon weighs ten pounds.

This ounce then brings all our weights and measures into harmony with the cubic foot.

The difference between the two ounces of 1.732 and 1.728 cubic inches is only four thousandths of a cubic inch; but the small difference is sufficient to throw our whole system into confusion.

The ounce of 1.728 cubic inches was divided into 432 grains, the Roman commercial ounce. $1.728 \div 432$ gives a grain of .004 cubic inches, which is just the difference between the two ounces.

This shows that the right number of grains in a cubic inch of water is 250; because $1,000 \div 250 = .004$.

Also, $1728 \times 250 = 432000$, which is the number of grains in a cubic foot of water, or just one thousand ounces.

This little matter of the grain can bring all our weights and measures into harmony with each other.

Eighteen pennyweight to the ounce of these .004 grains, instead of twenty brings troy weight into line.

Eighteen grains to the scruple, instead of twenty of the troy grains of .00376 cubic inches, brings apothecaries' weight into line.

Twenty-seven of these grains, even, instead of 27.34375 grains of .00396 cubic inches, brings avoirdupois weight into line.

Fifty-four of these grains of water, or minims, instead of sixty of .00361 cubic inches, brings apothecaries' measure into agreement with apothecaries' weight.

And so also with the imperial measure. The troy grain of .00376 cubic inches is too small, and requires 480 of them to make an ounce. There is just one grain too many in our present ounce.

$1.728 - .004 = 1.728$, and $1.732 \div 433 = .004$. This apparently small matter is sufficient to disarrange our whole system.

Exactly how, or when this came about it would be hard to

say. According to Sir John Herschel the English inch is too short by one thousandth part to be exactly cosmical. That an inch of 1.001 is contained 500,000,000 times in the axis of the earth.

Now the difference of these two inches is the difference of the two ounces. 1.728 cubic inches of 1.001 are equal to 1.732 cubic inches of 1.000, or English inches.

The ounce weight then is correct, and weights derived from it ought to be correct.

The capacity weights derived from the ounce are probably correct also. We need a uniform ounce and grain.

If the inch were made = 1.001, then our ounce will = 1.728 cubic inches, and if the grains in an ounce = 432, then each grain will = .004 cubic inches, and this is all that is needed to make our different systems mutually convertible.

The number of 432 is the square of the cubit of Memph, 20.7846 inches, and is associated with our measures of length.

$$432 \div 12 = \text{linear inches in a yard.}$$

$$432 \div 36 = \text{linear inches in one foot.}$$

$$432 \div 3 = 144 \text{ square inches in a square foot.}$$

$$432 \times 3 = 1296 = \text{square inches in a square yard.}$$

$$432 \div 48 = 9 = \text{square feet in a square yard.}$$

$$432 \times 4 = 1728 = \text{cubic inches in a cubic foot.}$$

$$432 \div 16 = 27 = \text{cubic feet in a cubic yard.}$$

$$432 \times 108 = 46656 = \text{cubic inches in a cubic yard.}$$

It is also connected with time, being the 3000th part of the circle of seconds, which again is taken from a measure of the earth's circumference.

The ounce of 1.732 cubic inches was probably taken from the cubit of Memph, 20.7846 inches being the twelfth part of that number.

20.7846 then stands for the number of cubic inches in a pound of water.

To sum up, the cubic ounce is derived from the cubic foot, and the cubic drachm from the ounce.

The half pint is a cube and the half gallon is a cube; the pint is a double cube and the gallon is a double cube. The measures of length and capacity are thus intimately related.

The fluid ounce weighs an ounce, and the drachm weighs a drachm! the pint weighs a pound, and the gallon eight pounds, and the large gallon ten pounds.

This amply connects measures of weight and capacity, and they tend to rectify each other.

The ounce, then, of 432 grains, and 1.728 cubic inches is the unit, about which all of our weights and measures could be readily adjusted into harmonious relations.

WATSON QUIMBY.

SILVER.

BY W. F. QUIMBY, M. D.

Gold and silver coin, from time immemorial, have constituted the money of the world.

The Creator, by endowing these metals with certain peculiar properties, as certainly designed them to be used for this purpose, as were wheat and corn intended for food, and wool and cotton for clothing. These metals were made difficult of attainment; and so skillfully were they placed in the rock, that their flow has been like the springs that furnish the water to the rivers that flow to the ocean.

So far, the demand seems to have regulated the supply; though the supply has of late been much supplemented by the use of paper money. But paper money derives its value from, and is based upon these metals. To demonetize either one of them then is to diminish, to a large extent the security of the paper currency.

The constitution of the United States plainly recognizes, coin of gold and silver as the legal tender money of the land; not gold or silver, but gold and silver.

Power to coin these metals into money, and regulate the relative value of the coins, was delegated to Congress; but not the power to *demonetize* either of them. Unless a special provision had been made, endowing the National Legislature with such a power, they might as well forbid the use of beef or pork for food.

The ordinances of God cannot be violated with impunity, and we have to work in harmony with their provisions, and not against them.

Because oxygen is the life-giving element of the air, you cannot, therefore, dispense with the nitrogen.

There was good reason for providing two metals suitable for currency; gold to express higher values, and silver for fractional currency, and common use. Even silver pennies are too small for convenience, and we use a cheaper substitute in copper. The silver, therefore is indispensable in commerce. What then can be the motive of those who wish to demonetize it?

It is stated that its bulk makes it inconvenient to handle in large values. But in these days when paper is almost universally used as a means of transfer, that objection is insufficient. Large movements of the metals are seldom necessary, and for international transactions gold is almost entirely used.

This very inertia of silver renders it a safe and suitable basis for paper currency. The superior convenience of paper money for commercial circulation, has displaced for this purpose, not only silver, but gold also.

The present national banking system is open to the objection, that the government being the debtor, demands the custody of the evidence of its own indebtedness.

Now, if the risk of such an imprudent arrangement belonged only to the bond-owners, the rest of the people might look on with serenity; but the whole business of the country is involved in the stability of the paper currency.

Again the paying off of the public debt by diminishing the basis, has the effect of diminishing the amount of the circulating medium; and this depresses values of all kinds.

But the National Treasury has, also, become a bank of issue. The objection to this agreement is that the metallic security is located in one place, Washington. A perfectly stable banking system could be based upon silver, in bars, in ingots and in coin distributed throughout the different states, but the paper limited and regulated by the general government as at present. Two dollars to one might be safely floated in such a system.

Gold might also be associated with the silver, but owing to occasional demands for exportation, it would be more fluctuating than silver.

It is urged against the use of both gold and silver, as currency that it is difficult to maintain a parity of value between them. This difficulty, if it is one, however, has always existed and the experience of four thousand years of the co-ordinate use of the two metals shows that it is rather fictitious.

All commodities used in commerce are subject to fluctuations of value. Gold and silver are no exceptions to this rule.

There is no such thing as an unchanging standard of value.

Gold is subject to rise and fall of price according to the abundance or scarcity of production, and the demand for commercial use.

One of the most important functions of silver money is to limit the price of gold. If silver were demonetized, the price of gold would be doubled, because the real money of the country would be diminished one half.

A house which before had been worth ten thousand dollars would only be worth five thousand; if a bushel of wheat had been worth two dollars, it would now be worth but one; if wages had been worth two dollars per day, they would now be worth but one.

If a man had bought a farm for ten thousand dollars and had paid five thousand on it, he would find his whole capital sunk; and so with stocks, railroads, and all real investments.

Is it any wonder then that hard times, and a general prostration of business came on when, without any warning at one fell swoop in 1873, silver was demonetized. There was no public demand for such a thing, nor any discussion on the subject, but suddenly and without comprehension of the consequences of such a measure, the fact was accomplished.

I suppose that at the time our government was very much in need of money, and that the interested few who had money to lend, said, "if you will demonetize silver you can have all the money you want;" for well they knew that thus the rate of interest, the price paid for the use of money, would be doubled. So they and all who derive an income from money loaned would be the gainers; but all others, from mechanics to employers who derive incomes from money invested in productive industry, would be losers.

No doubt plausible arguments were presented, and without being aware of the disastrous consequences, our public officers were induced to consummate the project. Now here is evidently a struggle of interest between the comparative few who derive incomes from loaning money, and the millions whose incomes arise from productive industry. For if money was made scarce, the price paid for the use of it, must increase. Who then shall prevail, the few, or the many?

In a country like this where every man votes, when the matter is understood, there can be no question as to the result. Wheat and corn are the chief grains used for food in the United States. Now, if in the interest of speculators in wheat, it should be decreed that

corn should not be an article of diet in the American Union, would not wheat advance in price; possibly double?

And for whose benefit, the people's or the speculator's? Cotton and wool are used for clothing. If, for the benefit of dealers in wool, it should be ordained that cotton should no longer be worn, would not wool advance in price? Or, again if we are prohibited from eating pork, would not beef and mutton rise in price? So if you prohibit the use of silver as money, the price of gold will advance, or what amounts to the same thing, the price of everything else, wages, property, stocks and other investments, will fall.

Providence has provided us with a variety of food, a variety of materials for clothing, and a variety of metals for money, so that if any one should happen to be scarce, the others will check its rise in price. For if you diminish the supply of anything, the demand remaining the same, the price must rise. So if money is made scarce either by demonetizing one of the precious metals, or by any other means, the value of all other commodities will diminish. At one time during the demonetization of silver it was attempted to make a corner in gold by interested parties to control the market. Had they succeeded, they would have been enabled to depress all values, and monied men could have bought stocks and other securities at a low figure, and houses for less money than it cost to build them. They only did not succeed because the government came to the rescue with abundant disbursements of gold. The men that engaged in this business, are the ones that most strongly urge monometalism, because, then they could more easily manipulate the market. But most all other business men would be at their mercy. It shows the danger of having only one of the precious metals in use for money, and that the scarcer of the two; for it puts it in the power of a few unscrupulous men to derange the whole business system of the country.

The present system of the government coining so many silver dollars per month, is not a correct one. It would be quite as proper for the government to say how much iron should be mined in a month, or how much coal should be dug, or how much cotton grown in a year. Owners of silver should be left free to coin it or not, and into what denominations. The demand will regulate the supply. No man will have silver coined into dollars that are not wanted. It has been urged that the silver dollars will not pass into circulation, but remain accumulated in the treasury. This is true also of the gold. There are far more silver dollars in circulation than gold ones. The reason that metallic dollars are not in demand, is that there are so many treasury and bank notes in use, and it is well known in the history of banking, that well secured notes will drive out of circulation coins of the same denomination. The fractional paper currency at one time entirely displaced the silver coinage; but when the paper was withdrawn the silver came into use and so it continues.

And so if the one and two dollar notes were withdrawn, the gold and silver dollars would come into use. This would be very impolitic, however, at the present time. It would be better to place the coinage of gold and silver on equal terms and then for the government to cease coining the silver dollars. It is farther urged that the silver dollar of 412.5 grains, is not of equal value with the gold dollar of 25.8 grains, and that therefore if silver coin is made a legal tender, its weight should be somewhat increased. It is not necessary that the coins should be of exactly the same value as they are continually oscillating in regard to each other, as well as to other commodities.

But it would not be proper to increase the weight of silver coins until their coinage is made free, and subject only to the same seigniorage as gold; for undoubtedly in that case the price of silver would go up. If a new use is discovered for anything, the supply remaining the same, the price must advance. If a method should be found of making clothing out of paper, it would soon cost more to print a newspaper. The same result would ensue, if printers ink should come into use for dyeing calico.

There is another reason why the weight of our silver coinage should not be increased.

The public debt was made payable in coins of that weight. There are two parties to the bargain, the money loaners on the one side, the people of the United States on the other. To increase the weight of silver coin would add to the burden of the people and be unjust. Or if you assert that silver has not declined in value, but that gold has advanced, to decrease the weight of our gold coinage would be unjust to the money-lender. It may have been shrewd, but not quite honorable, to contract to have a debt made payable in gold or silver coin, and then endeavor to demonetize the silver, so as to double the amount of the debt; and in effect all other debts.

It is further urged against the use of silver coin as money, that the United States cannot alone maintain it at par value in the face of its disuse by the rest of the world. This position is controverted by the fact that at the period of the demonetization of silver in 1873, the American silver coins of the present weight were at a premium.

It was even thought necessary at one time to reduce the weight of the subsidiary silver coinage in order to prevent its transportation to foreign countries. This is a matter that should be corrected; and let the silver be exported if any one wishes to buy it.

France also is an illustration of the falsity of this position. Surrounded by nations that have demonetized silver, she maintains its use much to her advantage.

The United States should preserve her entire liberty and independence in such matters. We should be very careful indeed about entering into alliances with the other nations that might prove inconvenient if not dangerous. It certainly would be a good thing if all the nations would demonetize silver, for then money would be cheaper, the rate of interest lower, and this again would result in stimulating business.

Banks of issue are usually based upon gold and silver coin. It may be broadly stated that all the paper money of our nation is based upon gold and silver coin. Now if silver should be demonetized gold, the scarcer of the two, would be left to bear the whole weight of the paper money. The hazard of contraction would be extreme from this cause alone; but suppose in addition that either from wars, or various complications and business troubles, a great demand for the exportation of gold should arise in Europe, then our great fabric of paper currency would be left without adequate support, and a great financial crash would ensue, disastrous to all the business interests of our country.

In addition to all these financial considerations, when we reflect that the production of silver is one of our most important industries, it would be very unwise in the American people to deprive it of its most useful quality, but its free coinage on equal terms with gold should be insisted upon.

It might be interesting to consider why the silver dollar was made to weigh just 412.5 grains. That number is the thousandth part of the diameter of a circle in terms of seconds. This might be a coincidence were it not that 1296 the number of square inches in a square yard, is the thousandth part of the circumference of a circle in terms of seconds. As the yard of 36 inches is one of the most ancient of measures, it is possible that a silver coin of 412.5 grains is equally ancient.

It is not less remarkable that the number of grains of gold in the half eagle 116.4 is equal to the diameter of the earth's orbit in terms of day parts.

THE UNIVERSAL MERIDIAN.

LECTURE BY DR. JANSSEN, AT THE PARIS GEOGRAPHICAL SOCIETY.

We wish to call the attention of our readers to this interesting paper by Dr. Janssen in "Nature."

It will be remembered that we wrote of the International Congress at Rome as being primarily and particularly a French metrical congress which adjourned to meet at Washington in October, 1884. This was ostensibly a great compliment to the Republic of the West but was really nothing more nor less than a little sop to the Americans for the purpose of inducing them to adopt the French metre. The idea that the meridian of Greenwich should be chosen as the prime was thrown out in order to catch the English. The whole scheme was perfectly transparent and was concocted by Dr. Barnard and his foreign coadjutors to foist upon the English speaking people their false metre.

Dr. Janssen's paper shows that "the best laid schemes of mice and men gang aft aglee." It will be remembered that the convention at Washington adopted Greenwich meridian as prime and agreed that astronomical and civil time should both begin at midnight. It is plain that France is not satisfied to accept the meridian of Greenwich. If she should succeed in effecting the adoption of the metrical system by the Anglo-Saxon world, she might agree amicably to accept the meridian, but not having accomplished her object, she is going back on the decision of the convention. Dr. Janssen argues in favor of the meridian of the Island of Ferro as prime. He is correct with regard to a neutral meridian, but that will be the Pyramid, not the Island of Ferro. Let him study this without prejudice.

When the question of the French metre came up, it was declared by Commodore Rogers to be out of order, but it appears from Dr. Janssen's report that it was discussed. He says:

After the discussion of these various questions, the labours of the Congress approached their term; it was then that the French delegation made the proposal it had been charged to present—a proposal having reference to an important extension of the decimal system.

The Congress of Washington, by its importance and by its object, which aimed definitely at the continuation of that great French work of unification and of progress inaugurated at the end of the last century, offered an altogether appropriate opportunity to ask for the world a new extension of those applications of the decimal system which constituted the whole merit and the whole success of our reform of weights and measures.

The extension had relation to the measurement of angles and of time.

At the date of the establishment of the metrical system the decimal division was, as is known, extended to the measures of angles and time. Numerous instruments were even constructed according to the new system. As far as time is concerned, the reform, introduced too drastically and without sufficient discretion, it may be said, clashed with too inveterate usages, and was rapidly abandoned; but in regard to the measure of angles, where the decimal division presents so many advantages, the reform held its ground much better, and has maintained itself in certain practices to this day. Thus, for example, the division of the circumference into 400 degrees was adopted from the beginning by Laplace, and it is currently employed in celestial mechanics. For the measurement of the arc of the meridian, whence the metre was derived, Delambre and Mechain availed themselves of repeating circles divided into 400°. Finally, in our day, Colonel Perrier, Chief of the Geographical service, of our Ministry of War, makes use of instruments with decimal division, and at this moment calculates even logarithmic tables with eight decimals appropriated to this mode of division.

It is above all, however, when it is required to execute long calculations on angular measures that the decimal division presents immense advantages. On this point nothing but unanimity may now be said to reign among learned men.

The Conference of Rome, which assembled so many astronomers, geodesists, and eminent topographers—that is, just the men of most weight and having the greatest interest in the question—issued on this subject a resolution, the high authority of which it is impossible to disregard.

It is now, then, evident that the decimal system, which has already rendered so many services in the measurements of length, of volumes, and of weights, is called upon to render analogous services in the domain of angular magnitudes and of time.

I am aware that this question of the decimal division has to contend with legitimate apprehensions, principally in reference to the measure of time. People are afraid of doing violence to secular customs and overturning consecrated usages. On this aspect of the business, I think we ought to be fully assured. The lessons of the past will be put to profit. It will be understood how it was for having endeavored to push a reform beyond the due domain of science, and for having done violence to the habits of daily life, that disaster was experienced during the epoch of the Revolution. It is proper to resume the question, but it is proper to resume it with an appreciation of the limits which good sense and experience will always indicate to wise and experienced men.

I think the character of the reform would be sufficiently indicated by saying that the question is principally to make a new effort towards the application of the decimal system in the scientific world.

We met at first with a sufficiently warm opposition. The president was of opinion that the proposal should not be offered for discussion, but I have to acknowledge that he finally yielded very courteously, "out of deference," he said, "to the delegates of France, and because we are happy to do them honor in all things."

The majority decided that the proposal should be discussed. The French delegate then spoke, and the meeting passed to the definitive vote. The success was then complete, for the proposal was adopted by twenty-one votes, without one dissentient voice.

Such is the work of the Congress.

This work is considerable. Its importance, however, is derived much more from the principles enunciated by the Congress than from the solutions it adopted.

The establishment of a single meridian and of a universal day, the unification of the astronomical and civil days, the extension of the decimal system, these are reforms which the progress of science and of international relations rendered opportune and desirable.

In the application, however, of the principles, the Congress has been less successful.

In the choice of a prime meridian it allowed itself to be too much carried away by the practical and immediate advantages of a meridian already in very extended use, and disregarded the conditions which would have assured to its work a universal and definitive adoption,

In regard to ourselves we have in this question adhered to the part prescribed to us by our past, our traditions, and the very character of our national genius. Our proposal was precisely that which we should have adopted ourselves if we had had to take the initiation of this reform. The nation which created the metrical system could propose none other than it did. If our purely scientific and disinterested opinion did not unite the majority around it, the reverse was not for France, but for science. But science is the sovereign of modern times and one cannot now detach himself from it with impunity. It is vain to say that the meridian of Greenwich is *de facto* the universal meridian, that it reigns to-day over almost all the navies of the globe, and that its adoption only consecrates a fact which has already established itself and transforms into law the institutions of fact.

I reply that that is all true. I even add, if it is desired, that such is only what is merited by the great labors of the English marine—labors which, we the initiators of hydrography, more than any others appreciate at their true value. But however considerable may be these labors and however great the numbers of those availing themselves of them, yet with the experience of the past and in the name of history I say that these merits will not be able to prevent the inevitable consequences resulting from the personal character of this meridian. And in point of fact has not France—she, too—had a geographical career? The meridian of the island of Ferro, which soon, in the hands of Guillaume Delisle and of our great geographers of the Eighteenth century, became French—did it not bear sway in cartography for more than two centuries, and that with an authority not even equalled to-day by that on the other side of the Channel?

And yet the meridian of the island of Ferro, after that brilliant career, is to-day more and more abandoned, and the fair attempt of the Seventeenth century finds itself entirely compromised!

What is the cause, then, which has led to this vexatious result? Apparently a mere trifle. It is because, as we have already said, instead of leaving the meridian of the island of Ferro in conformity with its first intention instead of maintaining it in the purely scientific character which it received from the hands of Richelieu, that great spirit who so well understood that an institution of a universal order must bear no personal investiture, this character was imprudently changed by bringing the position of this meridian into relation with that of Paris, in place of bringing the position of this capital, like any other point, into relation with it.

That is the mistake which compromised the fortune of this reform so firmly and judiciously established by its illustrious author. Now, this mistake, is it not committed to-day by once more taking a national meridian and making it the universal point of departure for longitudes? Is one then not justified in foreseeing that the cause would produce the same effects, with the difference, nevertheless, that in the advanced state of civilization prevailing to-day among the nations, a particular supremacy, of whatever nature, would be much more promptly abandoned than it was two centuries ago.

It is, accordingly, much to be feared that the establishment of the new meridian, if it even succeed in getting established, would again be an attempt without a future.

France who finds in the history of even her own past the double lesson of the progressive abandonment of her national meridian and of the ever growing appreciation of

the scientific and improved system of weights and measures, ought to make known to Congress a counsel dictated by her own experience.

Does this attitude, however, sufficiently absolve us? Have we discharged towards the world and toward ourselves the debt due by a generous and enlightened nation which has always been delighted to take the initiative tasks conducive to the general well being? I do not think so; and were it allowed to me to express a wish, it would be that we should on this occasion again join example to precept. I should like that the France of the nineteenth century, considering herself the heir of the France of the Seventeenth, would with the benefit of the experience she has in that interval acquired, resume the fair attempt of Richelieu and herself establish the neutral meridian.

This institution, well conceived and planted on exclusively scientific bases, would gradually rally to it the adhesion of all. England herself, who, if possessing a lively national sentiment, has likewise an appreciation of what is just and great, would end by attaching herself to it. And then would this reform always attempted in vain, and again quite recently compromised, be finally secured to the world and to science.

Be that as it may, and outside the question of the meridian which is not yet settled, let us not forget that the accession of England to the Metrical Convention and the resolution for the extension of the decimal system are results demonstrating that our presence at Washington was not useless either to science or to progress.

Immediately after the convention a bill was presented to Congress for the purpose of making the French metric system compulsory in all government transactions after March 1st, 1889. That bill did not pass last Congress, nor will it pass next, or any succeeding Congress.

THE LUNAR ASTRONOMICAL YEAR.

The lunar astronomical year consists of twelve lunations; and since the length of a lunation is different at different times, we have:

- $$\begin{aligned} &^d 29.5315343 = \text{maximum length of lunation.} \\ &29.5305991 = \text{lunation 4000 years ago.} \\ &29.5305887 = \text{present length of lunation.} \\ &29.5305311 = \text{minimum length of lunation.} \end{aligned}$$

Multiplying these numbers by 12 we get:

- $$\begin{aligned} &^d 354.3784116 = \text{maximum length of lunar year.} \\ &354.3671892 = \text{length of lunar year 4000 years ago.} \\ &354.3670644 = \text{present length of lunar year.} \\ &354.3663732 = \text{minimum length of lunar year.} \end{aligned}$$

JOHN N. STOCKWELL.

THE INSTITUTION OF CIVIL ENGINEERS LONDON, ENGLAND.

EXTRACT FROM MINUTES OF PROCEEDINGS OF THE INSTITUTION OF CIVIL ENGINEERS, LONDON, ENGLAND, JANUARY, 20th, 1885. SIR FREDERICK J. BRAMWELL, F. R. S., PRESIDENT, IN THE CHAIR.

Paper by Arthur Hamilton Smythe, B. A. "A comparison of British and Metric measures for engineering purposes." We will present the main features of this paper which argues in favor of the Metric system in our next issue. In the discussion upon it, Sir Frederick Bramwell read an extract from a speech of Mr. Beresford Hope in the British Parliament, May 13th, 1868.

"Decimalization is a process of calculation for the benefit of the calculator. Metricalization is not a process, but a system of measures, so called from its unit or base, which happens accidentally to be facilitated by the ease with which its details may be worked out through means of the decimal notation. The metrical system itself is an abstruse and philosophic one, founded upon the fancy of some Frenchmen of science at the time of the revolution, who adopted as the starting point of the system the measurement of the earth's circumference, and by way of a unit, measured the 10,000,000th part of a quadrant of a meridian through Paris (about 39 5-13 inches) which they termed a 'Meter.' No doubt those multiplies and aliquot parts of the meter which form the French measures of length are adjusted to meet the decimal system, as are also the measures of area, capacity and weight, which are by a further process built upon the metre. But decimal notation is equally applicable for the man who finds that it helps his calculations whenever he has to work out his sum in our old weights and measures; for decimals are really not a system, but, as I said, a process for easily reaching a certain practical result, like logarithms or algebraical symbols. I grant all the advantages which their friends urge in favor of decimals for the purpose of calculation; but it requires no act of parliament to enable those who appreciate them to make their own calculations by way of decimals.

The sufferers will be the little people, the small buyers and sellers—the hucksters and the marketers—who will be compelled under the penalties of a compulsory act of parliament, to learn and to use a system which is, in its outward type, as non-natural as it is novel. I will, in order to prove my point, take the most familiar instance, and show that although a great deal has been said about the advantages of the French subdivision, yet, after all, our subdivisions are more natural for the ordinary purposes of life. If a boy has to divide an apple, does he ever think anything about the circumference of the earth and its aliquot parts, or about the decimal system and its unrivalled facilities of calculation? No; but he takes his apple, and cuts it into two parts if he wants to halve it, and those halves into quarters if he wants to make four parts of it. In the same way, if a housewife has to cut up the loaf for her family, she divides it into two, into four, eight, or sixteen parts, and the sixteen people share their bread naturally. Supposing the loaf to weigh originally a pound, each of these sixteen divisions comes out an ounce. Such is the *rationale* of our system of measuring, the binary system so called, founded on continual halving, and proved by the common sense of mankind, before the great era of enlightenment inaugurated in 1789, to be the most convenient and natural one.

* * * * *

Decimal notation is then, after all, a process, and not a system. It is a process good for the school, and good for the bustling counting house and the large sum, but the

poor man would be completely thrown out if he had to employ under penal legislation too—decimal points for the purpose of measuring his little purchases by halves and quarters. With permissive means, such as now exist, the system will come in where it is wanted; but under a compulsory enactment it will intrude itself everywhere, and show itself in its real colors as nothing less than a public nuisance.

* * * * *

If the theorists and the men of wealth—men of brains, it may be, but as certainly men of self assurance—have worked out this system for themselves, there are poor men, who form the majority of mankind for whom it will never answer, and there are men of brains at least equal who are decidedly opposed to its adoption. Is it not possible that our present system is not only quite as convenient and useful as the metric system, but a little more philosophical also? Why should a standard founded on the quadrant of the earth's circumference passing through the meridian of Paris be a better one than ours? No doubt it looks very solemn, from the grand nomenclature with which it is propped, but all those odd names for the French weights and measures were adopted at the first heat of a great revolution, when the pedantic aping after Greek and Latin terms led to their being applied to everything novel and French—from the scanty proportions of a lady's dress to the most intricate principles of jurisprudence and moral philosophy.

May it not, I repeat, be just possible that our unit is as good as that of the French, even upon the most abstract grounds?"

TWO PYRAMIDS.

O'erlooking Egypt's mighty stream doth rise,
 A monument uplifted toward the skies,
 Piled stone on stone by human arts and hands
 On rock foundation firm amid the sands,
 Which wash and wear against its hoary sides,
 While sands and winds its unmoved might derides.
 In ancient time its origin is lost,
 Nothing remains to tell us what its cost.
 No record in itself it yet reveals,
 Nor shows what purpose its vast form conceals.
 For centuries to mankind its use unknown,
 Or, if of any use more than a stone,
 There it yet stands, a great enigma still
 For him to meditate upon, who will
 Into the past or future strive to peer,
 Strive on and understand not, but revere
 What is unknown, and, may he wisely pause
 Ere his presumption questions ways and laws,
 Which his Creator kind perhaps may hide.
 Lest man o'er all might aim unreined to ride,
 And nothing think too high for him to know,
 But all from his own will and reason grow.
 By square and compass, line and plummet's aid,
 With accuracy each measurement is made.
 Angle and circle noted well, by all
 Who in the task engage or on it call,

Its secrets to deliver as their prize,
And yield its plan and object to their eyes.
Silent, as yet, or in uncertain tones,
E'en if they speak at all, its massive stones
Remain a wonder to a marvelling host,
A more than wonder, since not time can boast
A victory here, though valiant is the fight
And time, man, elements 'gainst it unite.
One among seven, it stood in ages past,
The other six destroyed, and this the last
And only, now in its lone grandeur stands
Towering above the Libyan desert sands.
Why it was built we vainly ask the world?
Who from its summit its great capstone hurled?
Who robbed it of its polished case, and when?
Who broke and marred its pavement, and who then
Destroyed its corners, its great trenches spoiled,
Its causeway ruined and its beauty soiled?
What is the meaning of its empty coffer?
Where is the cover? Who reply can offer?
Was it with inches built, or cubit measure?
Was it for naught, or where its hidden treasure?
Where shall we turn or hope to find solution
For all these ancient problems' evolution.
Unyielding mathematics strictly tell
Its length and breadth in cubit, inch or ell,
All its proportions bear a nice relation
To some great plan conceived ere its foundation.
We ask the stars its age, and what they say
Fills us anew with wonder and dismay,
Almost abashed we stand upon its height,
And questioning gaze into its history's night.
If we incline to think superior power
To man's had influence in its natal hour,
Proud science scoffs, nor spares one vicious thrust
For those who overruling Providence do trust;
While wisdom is more modest, so more true,
Nor dares a step which one day she may rue.
Knowledge once gained is so much in advance,
But so-called science often breaks its lance,
And has again new armor to essay,
Which proving worse is shortly cast away.

This pyramid of stone can but remind
All of the wise ones here who comfort find
In thinking of these things and future time,
Of what the Lord reveals, the end of crime,
The setting up a kingdom on the earth,
When joy and peace and love shall have new birth;
When e'en the creature innocent of sin,
But suffering for man's fault shall come within
The radius of the blessings then so free

That all that doth offend away shall flee.
 When nothing shall pollute the living fountain,
 Nor yet "destroy in all his holy mountain."
 When all the building of His saints complete
 Of "living stones framed fitly" too, and meet
 To "reign on earth," and rule each subject nation
 With truth and justice, "bringing in salvation."
 "A stone cut from a mountain without hands,"
 Shall erst increase and fill all heathen lands,
 Shall grow and prosper, men shall sheathe their swords
 Creation sing the "kingdom is the Lord's,"
 A universe beholding wrapt in light,
 The sun of Righteousness dispelling night.
 Wisdom unsearchable shall banish doubt,
 Truly, "His judgments are past finding out."
 A moral pyramid, thus upbuilt shall be
 Of which the type in Egypt's midst we see.
 Who is a Rock," but our own Lord and God
 On whom is built foundation sure and good
 Of prophets and apostles, wisely taught
 By Him whose purposes ne'er come to naught.
 And "Jesus Christ, the chief and corner stone,"
 Crowning the structure, for 'tis He alone,
 Who is the "Head," who is the life, the way,
 The truth, our joy, who wait and wish the day
 For "His revealing with the saints," who weep
 His long delay and grieve for "those who sleep,"
 Whom He will raise, and "bring with Him" and give
 Eternal joy and peace "and they shall live."
 So, these two pyramids no capstones bear,
 The stone one missing is, we know not where,
 Our "Head" and "Cornerstone" shall yet return,
 Nor then be spurned, but all the spurners spurn.
 Shall not the pyramid in Egypt's sands
 Abide its time till all the ransomed bands
 Shall look upon its beauty, then restored,
 And hail it as an "altar to the Lord,"
 A "sign and witness" in proud Pharaoh's home
 "Unto the Lord of hosts," with Jesus come?
 Shall not the type and witness yet be crowned,
 When earth's millennial jubilee shall sound?
 The nations no more rivalling in arms,
 Nor trump of war proclaim its loud alarms,
 But, joining hand in hand, the stone to place
 Upon its top, and say, to it be grace,
 A headstone worthy of its ancient fame,
 Known not as Geezeh, but, by Jesus' name.

MRS. THOMAS BASSNETT,

Jacksonville, Florida, April 7, 1885.

THE KABBALAH.

EXTRACTS FROM THE WORK OF CHRISTIAN D. GINSBERG, LL. D.

A system of religious philosophy, or more properly of theosophy, which has not only exercised for hundreds of years an extraordinary influence on the mental development of so shrewd a people as the Jews, but has captivated the minds of some of the greatest thinkers of Christendom in the Sixteenth and Seventeenth centuries, claims the greatest attention of both the philosopher and the theologian. Listen to the story of its birth, growth and maturity as told by its followers: The Kabbalah was first taught by God himself to a select company of angels, who formed a Theosophic school in Paradise. After the fall the angels most graciously communicated this Heavenly doctrine to the disobedient child of earth, to furnish the Protoplasts with the means of returning to their pristine nobility and felicity. From Adam it passed over to Noah, and then to Abraham, the friend of God, who emigrated with it to Egypt, where the patriarch allowed a portion of this mysterious doctrine to ooze out. It was in this way that the Egyptians obtained some knowledge of it, and the other nations could introduce it into their philosophical systems. Moses, who was learned in all the wisdom of Egypt, was first initiated into it in the land of his birth, but became most proficient in it during his wanderings in the wilderness, when he not only devoted to it the leisure hours of the whole forty years, but received lessons in it from one of the angels. By the aid of this mysterious science the lawgiver was enabled to solve the difficulties which arose during his management of the Israelites. He covertly laid down the principles of this secret doctrine in the first four books of the Pentateuch, but withheld them from Deuteronomy. This constitutes the former the man and the latter the woman. Moses also initiated the seventy elders into this doctrine, and they again transmitted the secrets from hand to hand. Of all who formed the unbroken line of tradition, David and Solomon were most initiated into the Kabbalah. No one, however, dared to write it down, till Simon Ben Jochai, who lived at the time of the destruction of the second temple. Having been condemned to death by Titus, Rabbi Simon managed to escape with his son and concealed himself in a cavern where he remained for twelve years. Here he occupied himself entirely with the contemplation of the sublime Kabbalah, and was constantly visited by the prophet Elias, who disclosed to him some of the secrets which were still concealed from him. Here, too, his disciples resorted to be initiated by their master into these divine mysteries; and here, Simon Ben Jochai expired with this Heavenly doctrine in his mouth, while discoursing on it to his disciples. Scarcely had his spirit departed when a dazzling light filled the cavern so that no one could look at the Rabbi; whilst a burning fire appeared outside, forming as were a sentinel at the entrance of the cave, and denying admittance to the neighbors. It was not until the light inside and the light outside had disappeared that the lamp of Israel was extinguished. As they were preparing for his obsequies, a voice was heard from Heaven saying: "Come ye to the marriage of Simon B. Jochai. He is entering into peace and shall rest in his chamber." A flame preceded the coffin, which seemed enveloped and burning like fire. And when the remains were deposited in the tomb another voice was heard from heaven saying: "This is he who caused the earth to quake and the kingdoms to shake." His son, R. Eliezer, and his secretary, R. Abba, as well as his disciples then collated. R. Simon B. Jochai's treatises, and out of these composed the celebrated work called *Sohar* that is *Splendor*, which is the grand storehouse of Kabbalism.

Taking this *ex parte* statement for what it is worth, we shall have to examine the oldest documents which embody the tenets of the Kabbalah, and compare these doctrines with other systems, in order to ascertain the real date and origin of this theosophy. But, before this is done, it will be necessary to summarize as briefly as possible those doctrines which are peculiar to the Kabbalah, and which constitute it a separate system within the precincts of Judaism. The doctrines are as follows :

1. God is boundless in his nature. He has neither will, intention, desire, thought, language, nor action. He cannot be grasped and depicted ; and for this reason, is called En Soph, and as such He is in a certain sense not existent.

2. He is not the direct creator of the universe, since He could not will the creation ; and since a creation proceeding directly from Him would have to be as boundless and as perfect as He is himself.

3. He at first sent forth ten emanations, or *sephiroth*, which are begotten, not made, and which are both infinite and finite.

4. From these Sefhiroth, which are the Archetypal man, the different worlds gradually and successively evolved. These revolutionary worlds are the brightness and express image of their progenitors, the Sefhiroth, which uphold all things.

5. These emanations, or Sefhiroth, gave rise to or created in their own image all human souls. These souls are pre-existent. They occupy a special hall in the upper world, of spirits, and there already decide whether they shall pursue a good or bad course in their temporary sojourn in the human body, which is also fashioned according to the archetypal image.

6. No one has seen the En Soph at any time. It is the Sefhiroth in whom the En Soph is incarnate, who have revealed themselves to us, and to whom the anthropomorphisms of Scripture and the Hagada refer. Thus when it is said, "God spake, descended upon earth, ascended into Heaven, smelled the sweet smell of sacrifices, repented in his heart, was angry," etc., or when the Hagadic works describe the body and the mansions of the Deity, etc. ; all this does not refer to the En Soph, but to these intermediate beings.

7. It is an absolute condition of the soul to return to the infinite source whence it emanated, after developing all those perfections, the germs of which are indelibly inherent in it. If it fails to develop these germs, it must migrate into another body. And in case it is still too weak to acquire the virtues for which it is sent to this earth, it is united to another and a stronger soul, which, occupying the same body with it, aids its weaker companion in obtaining the object for which it came down from the world of spirits.

8. When all the pre-existent souls shall have passed the probationary period here below, the restitution of all things will take place ; Satan will be restored to an angel of light, hell will disappear, and all souls will return into the bosom of the Deity whence they emanated. The creature shall not then be distinguished from the Creator. Like God, the soul will rule the universe. She shall command, and God obey.

The books of the Kabbalists are : 1. The Book of Creation. 2. The Sohar. 3. The Commentary of the Ten Sefhiroth. The Book of Creation or *Jetzira* pretends to be a monologue of the patriarch Abraham, and premises that the contemplations it contains are those which led the father of the Hebrews to abandon the worship of the stars and embrace the faith of the true God. The whole treatise consists of six *Perakim* or chapters, subdivided into thirty-three very brief *Mishnas* or sections. The design of this treatise is to exhibit a system whereby the universe may be viewed methodically in connection with the truths given in the Bible, thus showing from the gradual and systematic development of the creation, and from the harmony which prevails in all its multitudinous component parts, that one God produced it all and that he is over all. The order in which God gave rise to this creation out of nothing, and the harmony which pervades all the constituent parts of the universe are given by the analogy which subsists between the visible things and the signs of thought, or the means whereby wisdom is expressed and

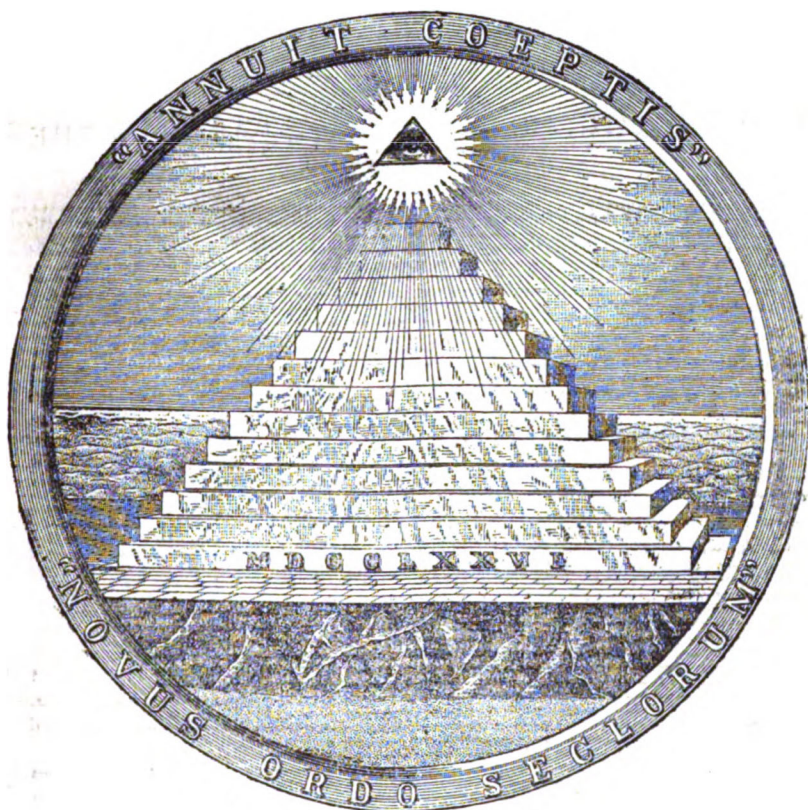
perpetuated among men. Since the letters have no absolute value nor can they be used as mere forms, but serve as the medium between essence and form, and like words assume the relation of form to the real essence, and of essence to the embryo and unexpressed thought, great value is attached to these letters, and to the combinations and analogies of which they are capable. The patriarch Abraham, therefore employs the double value of the twenty-two letters of the Hebrew alphabet; he uses them, both in their phonetic nature and in their sacred character, as expressing the divine truths of the scriptures. But, since the Hebrew alphabet is also used as numerals, which are represented by the fundamental number ten, and since the vowels of the language are also ten in number, this decade is added to the twenty-two letters, and these two kinds of signs—that is, the twenty-two letters of the alphabet and the ten fundamental numbers—are designated the thirty-two ways of secret wisdom; and the treatise opens with the declaration—"By thirty-two paths of secret wisdom, the Eternal, the Lord of Hosts, the God of Israel, the living God, the King of the universe, the Merciful and Gracious the high and exalted God, He who inhabiteth eternity, glorious and holy is His name, hath created the world by means of numbers, phonetic language, and writing." First of all comes the fundamental number ten. This decade is divided into a tetrad and hexad, and thereby is shown the gradual development of the world out of nothing. At first there existed nothing except the Divine Substance with the creative idea and the articulate word as the Holy Spirit, which is one with the Divine Substance and indivisible. Hence the spirit of the living God stands at the head of all things and is represented by the number one. "One is the spirit of the living God, blessed be His name, who liveth for ever, voice, spirit and word, this is the Holy Ghost." From this spirit the whole universe proceeded in gradual and successive emanations, in the following order; The creative air, represented by number two, emanated from the spirit. In it he engraved the twenty-two letters." The water again, represented by number three, proceeded from the air. "In it he engraved darkness and emptiness, slime and dung." Whilst the ether or fire, represented by the number four, emanated from the water. "In it he engraved the throne of his glory, the Ophanim, the Seraphim, the sacred animals, and the ministering angels, and from these three he formed his habitation; as it is written—'He maketh the wind his messengers, flaming fire his servants.' " These intermediate members between the Creator and the created world sustain a passive and created relationship to God, and an acting and creating relationship to the world; so that God is neither in immediate connection with the created and material universe, nor is his creative fiat hindered by matter. Then comes the hexad, each unit of which represents space in the six directions, or the four corners of the world, east, west, north and south, as well as height and depth which emanated from the ether, and in the center of which is the holy temple supporting the whole.

These constitute the primordial ten, from which the whole universe proceeded. And lastly follow the "twenty-two letters, by means of which God, having drawn, hewn and weighed them, and having variously changed and put them together, formed the souls of everything that has been made and that shall be made."

These twenty-two letters of the alphabet are then divided into three groups, consisting respectively of, 1. The three mothers, or fundamental letters, 2, seven double and 3, twelve simple consonants, to deduce therefrom a triad of elements, a heptade of opposites, and a duodecimo of simple things.



These cuts of the United States seal have been furnished by the kindness of Lieutenant Totten, U. S. A., the author of 'An Important Question,' which all our members should own and read. The cut of obverse of the seal, to accompany Mr. Weldon's paper, was cut from the medal of the anniversary of the adoption of our seal issued by the government of the United States, hence should be authentic.



The reverse is the plan proposed by the writer as a proper cut for this seal.

A plan proposed later by Lieutenant Totten has been sent us, but there was not time enough to have it cut for the present number. It has the same features as that proposed by the writer, but is better arranged and is accepted as superior, only, probably, excepting the limited number of steps, which should be just as many as existed in the Pyramid under the capstone.

C. L.

THE GRAND GALLERY AND THE BASE OF THE GREAT PYRAMID.

In the INTERNATIONAL STANDARD, the American magazine of the International Institute for preserving and perfecting the Anglo-Saxon weights and measures, for July, 1884 (vol. ii., No. 2, pp. 226, 227), Mr. J. H. Dow writes thus: "Possibly a full mathematical demonstration of the superhuman perfection of the Great Pyramid record will very soon be revealed, through the relations of the grand gallery to the Pyramid base." I am very glad to be able to show that the length of the grand gallery is, in a wonderful manner, scientifically connected with the base of the Pyramid.

When the sloping floor of the grand gallery has risen 1-100,000th of the area of the square base of the Pyramid *in inches*, $= \frac{9131.055^2}{100,000} = 833.762$, above the level of its commencement at the north wall, its length = 1881.59 + inches, which is the length of the floor line of the gallery between its north and south walls, as nearly as it will admit of exact measurement at the present day. This proves that the length of the grand gallery, as well as the length of the ante-chamber and king's chamber (and I may add, of the queen's chamber*), is connected with the Pyramid base, and therefore with the days in a solar year, because, as it is hardly necessary to add, a base-side of the Pyramid equals, in inches, the days in twenty-five solar years = $365.2422 \times 25 = 9131.055$. In this connection the sum may be varied thus: The vertical height at the south wall of the apex of the geometrical triangle formed by the length of the inclined floor of the grand gallery equals = 1-100,000th of the square of the days in twenty-five solar years = 833.762. The angle of inclination on which this calculation is based is $26^\circ 18' 10''$, which is, beyond doubt, the angle that was *intended* by the ancient builders.

This theorem gives the same length for the grand gallery as is given by Mr. James Simpson in the *Banner* for March 19, 1879 (vol. iii., No. 116), amongst other excellent equations, in the following:

$$\frac{365.2422 \times 51.51646}{10} = 1881.5985.$$

Such simple and yet highly scientific evidence as this cannot be refuted. It is preposterous for opponents to say that it is the result of mere blind coincidence. The wonder is that these "scientific teachers" can get so many to follow them thus blindly down the ruck of prejudice. Mr. R. A. Proctor has somewhere made a statement, I believe in his 'Myths and Marvels of Astronomy,' but I have not the book at hand at present to make the reference, to the effect that "the more coincidences brought forward connected with Pyramid mensurations the less he should think of them." This is tantamount to saying, that the greater the accumulation of proofs of the superhuman, scientific origin of the

*The length of the queen's chamber equals eleven-tenths of the width of the king's chamber = $\frac{206.066 \times 11}{10} = 226.6726$; and the length of the queen's chamber equals the diameter of a circle of equal area to the area of a square with a side = $\frac{91.31055 \times 22}{100} = 200.882$.

Great Pyramid, the less he (Mr. Proctor) would be ready to receive them. It is an axiom that a mathematical proposition proved in half a dozen different ways has more value than one proved once only, but when applied to the Pyramid, Mr. Proctor evidently thinks that this good old rule ought to be reversed.

NOTE.—Since the above was written, I have noticed the following: A square with a side equal to the area of the square base of the Pyramid = 9131.056×9131.056 , has the same area as a circle with a diameter equal to 50,000 times the length of the grand gallery = $1881.5985 \times 50,000$.

F. GASS.

LETTERS.

LETTER FROM REV. H. G. WOOD.

SHARON, PA., July 14, 1885.

Dear Sir:—I have reached the conclusion, with very strong evidence, that the standard Memphis cubit, of which the Turin cubit is a specimen, was the cubit of the Pyramid, the Hebrew cubit, and the cubit of Ezekiel. The points which I think can be well sustained are:

- 1st. The whole length was 20.625 British inches, divided into $28.28 = \frac{1}{2}$ of 56.56 digits, and symbolized Jehovah, and might properly be called the *mystical cubit*.
 - 2d. The double line at the twenty-fourth digit from the right hand indicated the *secular cubit* of 17.5 B. inches.
 - 3d. The space of nine digits, between the fifteenth and twenty-fourth digits, equal to 6.56 inches, was the "span."
 - 4th. The four left hand digits made the "handbreadth" equal to $3\frac{1}{4}$ inches.
 - 5th. The *standard digit* was .7292 inches.
 - 6th. The palm was $\frac{1}{4}$ of the twenty-four right hand digits or secular cubit.
 - 7th. Ezekiel's cubit, of a cubit and a handbreadth, was 24 standard digits + the 4 longer digits at the left hand.
 - 8th. The cubit to the knuckles or joint was the half of the double cubit of 41.25 inches, and the joint allowed the double cubit to be folded like our two-foot rule.
- I find nothing in the Scriptures in conflict with these points, and I believe they are in harmony with the facts of antiquarian research.

Faithfully yours, H. G. WOOD.

LETTER FROM R. COURTENAY.

TANNA, BOMBAY PRESIDENCY, 29, 4, '85.

Dear Sir:—I am most gratified at your asking me to become a member of the Institute. I have long been a student of the Pyramid, and I would gladly join you in resisting the introduction of the French system of weights and measures. But I would like to be satisfied on one point: There is nothing that the profane Egyptologist more desires than to show that the Pyramid was the outcome of Egyptian idolatry, and that in it were embodied merely Egyptian ideas of that remote period. John Taylor and Professor C. Piazza Smyth, on the contrary, lay as the very foundation stone of their theories that the Pyramid was in Egypt but not of Egypt. In his latest answer to Barnard, Professor Smyth writes regarding the inspiration under which it was built: "In-

spiration afforded apparently to one of the earliest Hebrew prophets . . . once temporarily in Egypt, but antagonistically to the Egyptian idolatry there." I have always felt it to be a matter of profound satisfaction that with the exception of the oval marks of the king there was not an inscription of any kind on the Pyramid to show the most distant connection between it and any of the hosts of Egyptian divinities, for I felt sure that had such a connection been established it would be vain to look there for the Lord Jesus Christ, for He would never share a temple with any heathen god or goddess. "What fellowship hath Christ with Belial or the Temple of God with Idols?" I have therefore been much disquieted by recent articles in the *INTERNATIONAL STANDARD*, the tendency of which is to break down the partition wall between the Hebrew worship of God and pagan idolatry. At page 606 of the January number the *crux ansata*, the obscene symbol Tau of the pagan mysteries, is confounded with the cross of Christ, as was done by the Roman Church in the time of Constantine with terrible consequences that have survived to the present time. I would ask you to compare carefully the article on the Sphinx in the November number with what Professor Smyth has written on the same subject in pp. 507 to 512 of 'Our Inheritance.' (4th ed.) Then it is quite true that Isis and Isa or Isha were the same, but this only shows more clearly (what has been demonstrated by able writers) that Isis was the Ishtar of the Babylonians, the goddess of beauty and lust, the Ishtareth (Ashtoreth) of the Phœnicians, whose symbol also was the moon. The Bible leaves us in no doubt as to the mind of the Lord in regard to the notoriously impure worship of that divinity. (Jeremiah xlv. 17-19, 22; I Kings xi. 5, etc.) I firmly believe that the mysteries of Isis, afterwards transferred to Eleusis, came into existence during those 106 years whilst the Great and second Pyramids were being built, during all of which time the temples were closed, and the Egyptians were forced to practice their idolatrous rites in secret. I hold, therefore, that the Shemitic origin of the Pyramid and its entire freedom from, and complete antagonism to, pagan idolatry are fundamental principles without which it would be impossible to assign any sound reason why any Christian man should study the Pyramid or expect to find in it a repository of the divine wisdom. I trust, therefore, that in joining the Institute I shall not be identifying myself with a body holding any opposite views to these. But I infer that the passages to which I object were used rather in a poetical sense than as expressions of deep beliefs. I do not suppose that the Institute are a whit more friendly to Egyptian idolatry than I am myself, but I wish to elicit a clear statement of their views on so vital a point. In the expectation that they will be found to coincide with my own, I ask you to do me the honor of enrolling me as a member of your society.

I am yours sincerely,

R. COURTENAY.

EXTRACT FROM LETTER OF GEORGE LEACH.

RIVERSIDE, SAN BERNARDINE COUNTY, CAL., June 24, 1885.

I have been greatly interested in your article on "The Unveiling of Isis" and the remarkable manner in which you have been led to the evidences of the 12th of Revelation applying to this nation. As you have brought the facts out, it is almost impossible to doubt your position; and why should it not be so? The Divine Word is infinite in itself—it is HIS WORD, it must be as infinite as Himself and never can be exhausted. Hence that the chapter alluded to is fulfilled in the planting of this great nation, it does not follow that it may not have other and deeper fulfillings in the future, which I believe it has. Hence I see that your "Unveiling of Isis" points to a higher and greater and more beautiful truth than Christendom has yet believed.

• Respectfully yours,

GEORGE LEACH.

JABALPUR.

DEAR SIR :—In forwarding the annual subscription of \$2.00 to your address, through the post office, I would, in expressing my readiness to become a member of the International Institute, lay stress on the prominent position occupied in the Institute by Professor C. P. Smyth, who is a firm believer in the truth of the Bible and the Shemitic origin of the Great Pyramid. I take for granted that all members of the Institute are believers in a divine revelation and entirely opposed to the system of religion professed by the ancient Egyptians at the time of Israel's bondage. You will excuse my making these remarks, as I may have entirely misunderstood the drift of certain passages in the specimen number you have so kindly sent me.

I am, dear sir, yours sincerely,

GEO. H. O'DONEL.

Church Mission High School, Jabalpur, C. P., India.

12 AVENUE ROAD, REGENTS' PARK, N. W.

Yours of 18th April reached me in due course, and I have to thank you for so far interesting yourself in my book as to ask the Rev. H. G. Wood to give his attention to the study of Pyramid chronology.

In comparing the measures of the grand gallery with Scripture chronology, Mr. Wood should be careful not to pay too close a heed to the dates in our Bibles by Bishop Usher—nor accept the error continually perpetrated by modern chronologists of placing the year of Christ's birth anywhere between B. C. 8-4. I go on the principle that the birth of our Saviour really and truly marks the commencement of the Christian era, even as regards dates. This is ably confirmed by the Rev. Mr. Galloway in "Chain of the Ages," compiled from historical sources alone, without the slightest leaning towards Pyramid symbolism.

My book has now been published close upon three years. It has met with as much success as can be hoped for a book of that character. I do not know whether Americans have purchased, but should think not, as you say these truths are not so widely known as in this country. I see not the slightest reason to change my views as to Pyramid teaching—the reverse. Every month that passes, as events are unrolled, reveals the wondrous edifice to be of divine origin and a revelation concerning the periods and times of the end. How serious and solemn are the times we are now living in. How deceitfully, how cunningly, the enemy of souls is trying to seduce them from their high allegiance by the specious devices of lawlessness and atheism. You will perceive, from pages 140 and 147 of 'Tower of Egypt,' that I believe anti-Christ will be thirty years old when he assumes regal powers; and as the Pyramid teaches us he may be expected in about A. D. 1912 (see page 93) he must now be living on the earth, dandled upon a mother's knee—unknown to all, but sure to be revealed when the set time arrives. Does not this conviction behoove us to see that, as virgins waiting for the bridegroom, our lamps are kept trimmed and burning.

Yours sincerely,

ARTHUR R. GRANVILLE.

TRANSACTIONS OF THE OHIO AUXILIARY SOCIETY OF THE INTERNATIONAL INSTITUTE.

MAY 20, 1885.

Alfred E. Watkins, South Orange, N. J.; Mr. R. Courtenay, Bombay, India; Rev. A. Buchanan, Jamestown, D. T.; Rev. Dr. Giesey, Washington, D. C., and E. C. Whittlesey, New London, Ct., were elected members.

Mrs. A. M. Searles read her translation from a French work by M. Lecoindre, pointing out the location of the resting places of the Israelites in their journeyings under the leadership of Moses.

An editorial from the Buffalo *Courier* ridiculing the work of the International Institute, and especially the proposed expedition to explore the Pyramid, was read by Mr. Latimer.

Letters were read from Alfred E. Watkins on the Egyptian expedition, and from Lieutenant Totten.

Lieutenant Totten has recently lectured on the Pyramid before the St. Anthony club of New York, mainly composed of Columbia college men, who are advocates of the metric system. After discussion on various subjects, the society adjourned for two weeks.

JUNE 3.

Henry Pierrepont of Brooklyn, N. Y.; Lieutenant Colonel Fraser of Trichinopoly, Madras; R. J. Kelly of Georgetown, Demerara, and Hon. William Bross of Chicago were elected members.

A letter was read from Lieutenant Colonel Fraser, R. E., Madras, India, in which he says: "Egypt has not lost importance. Nothing can be done in the present state of the river; but, depend on it, some attempts to divert the Nile will completely alter the condition of Lower Egypt, and events obscure to most of us, but clear to prophecy, will take place—the drying up of the Euphrates—the way of the kings from the sun risings—the highway from Egypt into Assyria have to be understood.

"The influence of America on the eastern question will, I think, be very sensible, and nowadays communication is so very rapid that the descendants of the ten tribes, wherever scattered, form one vast Protestant people. We have in the working population of India the old Egyptians and Chaldeans, who are allied in race to those who built the tower of Babel and the Great Pyramid. In the higher castes there are representative Egyptians and Babylonians who have preserved science in such a way that is imperfectly known to Europeans.

Professor C. Piazzi Smyth wrote: "Some time ago I saw a proposal to make Great Pyramid measures very abstruse and complicated because it was said the French metrical standards were so, and had great advantage on that account for measurements in electricity and chemistry as well as in mechanics. I maintained that the French mechanical standards were no more applicable to measuring and describing electrical and chemical actions than the English or any other mechanical standards of measure; besides which, mechanical standards were far more important in a national point of view, because used by the whole body of the people, than any curiously refined measures in the refined laboratories of a handful of scientific men. And now I see a similar idea expressed at the royal astronomical society, London, with respect to time arrangements." Professor Smyth then quoted from the address of Captain Wharton, who counselled the society that if any change was made in time it would, unless it was done cautiously and after considerable

notice had been given, cause disaster. Letters were also read from Mr. R. Courtenay, F. A. R. Winter and Professor H. L. Smith.

Rev. H. G. Wood then delivered his address on "The Temple Vision of Ezekiel."

At the close of the meeting a vote of thanks was tendered to Mr. Wood for his interesting and instructive lecture.

JUNE 17th.

J. N. Ashburn, Cleveland, O., George H. O'Donel, Jabalpur, India, J. M. Walter, Youngstown, O., M. D. Harter, Mansfield, O., and Mrs. Margaret Dunham, Collamer, O., were elected members.

Communications were received from several members. Lieutenant Colonel Fraser of Madras, India, wrote: "It appears to me that the International Institute could give its objects wide effect by bringing out under its auspices English and American editions of sets of tables for readily converting metric into Pyramid and Anglo-Saxon measures, arranged in three columns, the former in legible italics and the latter in capitals.

"There are plenty of tables in engineering pocketbooks for turning Anglo-Saxon into metric figures, but those, like myself who reckon in grains and feet, have to go to some trouble in reducing grammes and centimetres to terms they can understand at sight.

"The science of electricity, new within the last few years, has been appropriated and drawn within the metric vortex, from which it has to be extricated by earth commensurable units that will retain an Anglo-Saxon form."

Letters were also read from George H. O'Donel, Jabalpur, India; Arthur R. Granville, London, England; Charles De Medici, New York, and other United States members.

Mr. W. H. Searles then delivered an address on the recent work of Mr. R. Courtenay, "The Two Witnesses," and illustrated it by diagrams. At the conclusion of the meeting a vote of thanks was passed to Mr. M. H. Searles for his valuable address.

JULY 1, 1885.

George H. Burrows, Cincinnati, O., and George Thomas, Oswasso, Mich., were elected members. The president acknowledged the receipt of a pamphlet from Lieutenant-Colonel A. T. Fraser, entitled "Darkness in the Land of Egypt and Light in the Dwellings of the Children of Israel" and a book of poems from George A. Hammond, of Kingsclear, New Brunswick, "Queen Victoria's Olive Tree and other poems." Extracts were read from a pamphlet containing the proceedings of a meeting of civil engineers of London, England, with a discussion of the paper by Arthur H. Smythe, "A comparison of British and metric measures for engineering purposes." The papers of Mr. J. H. Weldon of Kilmallock, Ireland, on the reverse and obverse of the great seal of the United States were then read. After the papers Judge McMath rose to reply. He considered that Mr. Weldon was in error in attaching religious significance to number thirteen in the seal. The thirteen referred to the colonies and not the thirteen tribes. He said that the eagle held in his talon six arrows and not thirteen. He considered that strictly speaking the United States of America had no seal. That when the seal was devised there was no properly organized government, and that Congress did not adopt the seal until the 23d of September, 1779. The President and secretary make the impression of the seal on documents, but they cannot as in England affix the seal, though an expression is used. He considered that the use of the seal arose in times of ignorance when persons in authority were unable to write their signatures to documents, and that the seal was not a sign of civilization, but a remnant of barbarism.

Mr. Latimer in reply said that he considered that there was a government previous to the adoption of the constitution. He claimed that the government began on the 4th of July, 1776, or perhaps on the 7th of September, 1775, the date of the first prayer in Congress. He said that if we have no flag, the flag was adopted the 17th of June, 1777. The government of the United States had begun and was a government long before the adoption of the seal or the flag. He said that the seal was not an emblem

of ignorance, but was on the contrary a token of authority to be venerated. Signatures could be counterfeited, but as the seal was not permitted to be copied, it could not be counterfeited without great expense. He said the seal was used in early times when the art of writing was unknown, and cited the case of King Ahasuerus, when the decree was made against the Jews and sent to the rulers of every province according to the writing thereof, and to every people after their language. It was written in the name of King Ahasuerus and sealed with the King's ring. After some discussion a vote of thanks to Judge McMath for his able address was unanimously adopted, and the society adjourned for two weeks.

EDITORIAL NOTES.

Pyramid students believe that the grand gallery in its measures of an inch to the year is an epitome of the history of the Christian dispensation, and the measurements pointed to a great event in 1881. Their ridiculers, led by Mr. Proctor, asserted that Piazz Smyth and his followers had set their faith on the end of the world in that year, whereas they were looking forward to a crisis in the history of Anglo-Saxondom, and they believe that events in Egypt are fulfilling the prophecy which the measures indicated. In former days the Americans might have viewed the increase of British power with envy. To-day that feeling has almost vanished from our people, and we have lived to love and honor our British brethren and to applaud their success when it is obtained by right.

This episode of Anglo-Egyptian history has been wonderful, thrilling as a tale from the *Arabian Nights*. Looking at it from our standpoint we have seen from the beginning that England was sent into Egypt as a great savior, and that she is fulfilling the prophecy of the 19th chapter of Isaiah. She has entered her inheritance, that which formerly belonged to her; that in which we as Americans are deeply interested. While we have wondered at what we may call the color blindness of Mr. Gladstone, his utter ignorance seemingly of the prophetic side in the grand questions touching the occupation of Egypt, yet we have seen that he has been an instrument in the designs of Providence to show that God guides the affairs of the nations. He reminds us in some respects of that wonderful

prophet of the east, Balaam, who was forced to move in a direction contrary to his own will. Far be it from us to criticize unfairly the act of one of the grandest of England's statesmen; perhaps he has prevented by honorable means a disastrous war, such as must have ensued if he had given a hasty judgment at the critical moment of the negotiations between Russia and England. We understand the difficulty of guiding the ship of state through the breakers, and our sympathies and prayers are with Gladstone and his successor, and with our brethren in Britain in the glorious work which Providence has given them to do and which they will accomplish if not with some great statesman, then with some poor statesman whom the Lord will raise up to confound the wiser ones.

To the educators of Anglo-Saxondom who are ignorantly trying to force the metric system upon the youth of the country :

How can you, as good citizens and heirs of the wisdom of past ages, attempt to overthrow the weights and measures that have been handed down to you from time immemorial. If you can say that you know what you propose to give up in order to accept a foreign measure, you do it intelligently. Ask yourselves, therefore, this question. Do we understand the origin of our own weights and measures? Have we studied their antiquity, their relation to the cosmos? Do we understand what we propose to accept instead? Unless you can answer these questions affirmatively, you should be ashamed to profess to teach the youth of this country. You are following closet philosophers, and many of you have not the slightest knowledge of what you are doing, and do not know the difference between the decimal system and the French metric system, but think that the metric system means the decimalization of our own weights and measures; whereas you ought to know that the acceptance of the French metric system implies the utter overthrow of the Anglo-Saxon. You might as logically propose to substitute the French language for your mother tongue, and if you can read the signs of the times you must know that An-

glo-Saxon is to be the language of the world. You propose to give up your birthright without inquiring what it is. You are as bad as Esau. Do you know that there were hundreds of thousands of arrests and fines in France to enforce the French metre? Do you know that the same class of men who compelled its adoption burnt the Bible, thinking that they could destroy the Divine evidence of the origin of our weights and measures by destroying the book? Do you know that the advocates of the metre in England sought to make the use of the existing system a crime? As evidence of this, look at the penal clauses in the bill brought before the British parliament on the 24th of February, 1868.

"From and after the expiration of years from the passing of this act, the imperial and all other local or customary weights and measures shall be abolished, and every person who shall sell by any denomination of weights and measures other than those of the standard metric weights and measures, or such decimal multiples or decimal parts thereof as are authorized by this act, shall, on conviction, be liable to a penalty not exceeding a sum of forty shillings for every such sale."

"2. From and after the expiration of years after the passing of this act, if any person or persons shall print, or if the clerk of any market or other person shall make any return, price list, price current, or any journal or other paper containing price current or price list, in which the denomination of weights and measures quoted or referred to shall denote or imply a greater or less weight or measure than is denoted or implied by the same denomination of the metric weights and measures under and according to the provisions of this act, such person, or persons, or clerk of the market shall forfeit and pay any sum not exceeding ten shillings for every copy of every such return, price list, price current, journal, or other paper which he or they shall publish."

Some of you to-day insist upon a knowledge of the French metric system, being required for admission to your colleges. We beg that you will not put this upon your circulars till you have fully investigated this subject. We ask you who have not already stultified yourselves and given yourselves to the adoption

of this abortion of a measure, to study the question. And that you may have efficient assistance, we ask that you will take our magazine. We claim that it will repay you, not merely in the matter of weights and measures, but in that to which weights and measures lead, namely, an inquiry into the origin of race and language, science and religion.

People of the Anglo-Saxon world, hold to your weights and measures, hold to your Bible which proves them divine, spurn the false and Godless measure of the French infidel.

Mark the words of the late Abbé F. Moigno, of Paris, France: "Should the metre—absurd in principle (the ten-millionth part of the meridian, which varies in every part of the globe) wrong in its valuation or mensuration; expensive to an excess in its making; unmanageable, without being deformed; tyrannical and barbarous in its introduction—have been imposed on all countries, my sorrow would have been inconsolable."

Our thanks are due Mr. James Simpson, of Edinburgh, for copies of *The Scottish Geographical Magazine*, which contain much interesting and valuable information. We note specially an article on "The Egyptian Sûdan" by Dr. R. W. Felkin, F. R. S. E.

REVIEWS.

'Darkness in the Land of Egypt and Light in the Dwellings of the Children of Israel, an Indication to Antiquity of the Prevalence of Light and Heat Throughout the Universe, and the Real Nature of Darkness, as well as the Existence of Obscure Forces Around us in Unperceived Strength.' By Lieut. Col. A. T. Fraser, R. E. Published in London, England, by Edward Stanford, Charing Cross.

The author discusses the subject of light in general with suggestions as to the phenomenon in the land of Egypt. He says that the quality of darkness which we suppose to be the most obvious characteristic of space, next to its apparent emptiness, may be only imaginary, and that research may show that the universe is composed and pervaded with light which only wants favoring circumstances to spring into soft illumination or an ardent flame.

The stars, so far from being merely the suns we think them, are the indications of light all about us which we cannot see, but which the Israelites saw in their dwellings in Egypt; of forces all around us of vast and unobserved power; and they are, thus looked at, the necessary vestibule of heaven.

We have received from Albert Williams, Jr., chief of division of mining statistics, United States Geological Survey, a report of the mineral products of the United States. This digest summarizes results which appear, in more extended form, in a volume entitled 'The Mineral Resources of the United States, 1883 and 1884.' Mr. Williams gives tables valuable for reference, showing the quantities and values of the different mineral products of the country for the past three years. From these it appears that the total value of the metals and minerals produced in 1884 was \$39,100,008 less than in 1883, and that the decline in 1883 from 1882 was \$3,012,061; that is, the falling off

in value began on a small scale in 1883, but was accented in 1884. The net decline has been due rather to a depression in price than a decrease in quantity; indeed, several important substances show a decided increase in production, notwithstanding the general dullness of trade. The overproduction, taking the whole field into consideration, has been less than was generally feared.

We have received, through the kindness of Prof. Piazzzi Smyth, a pamphlet by George H. O'Donel, head master of the mission high school, Jabalpur, India. It treats the interesting prophecy of the seventy weeks, and contains the concise results of Mr. O'Donel's computations. This paper investigates the inference, drawn from the astronomical calculations with brief explanatory notes of Sir George B. Airy, late Astronomer Royal, that the date of the crucifixion is Friday, April 7, A. D. 30, or (if A. D. 30 be rejected as too early a year), Friday, April 23, A. D. 35.

OUR REST, a monthly paper devoted to the subject of Christ's Second Coming, and preparation of the church for that event.

On account of the extreme depression of business and scarcity of money, this valuable and interesting paper has been suspended in its publication a few months. It has been resumed with the June number lately issued. We can recommend it to our friends, as it has devoted much of its space to the position of the Great Pyramid, and of advocating the identity of the Anglo-Saxon race with the lost tribes of Israel. It is edited and published by C. H. Jones, 77 Clark street, Chicago, at \$1 per annum.

QUEEN VICTORIA'S OLIVE TREE AND OTHER POEMS, by George Arthur Hammond of Kingsclear, New Brunswick, Canada.

To the twelve-tribed house of Jacob, some of whom are known as JEWS, others hidden away as ANGLO-SAXONS, another

name for God's chosen people, these pages are dedicated by a native of Canada, a descendant of one of those adventurers who landed in Plymouth on December 11th, 1620, from the Mayflower. The poetry is good, the themes very interesting, unfolding the history and prophecies of the lost sheep of the house of Israel, the ten lost tribes in their past, present and future glorious destiny, as revealed in the Only Wonderful Book. We have been much interested in reading these fine poems, and will give extracts in a future number. London, (Eng.) printed and published by Robert Banks Racquet Court, Fleet street—and may be had of the author. Price 30 cents.

BLIND SIMEON'S PRAYER IN THE TEMPLE. By George Lilwall. Published by Guest & Co., 29 Paternoster Row, London, England. Eleven pages. Price three pence,

"Lord, now lettest Thou Thy servant depart in peace, according to thy word. For mine eyes have seen Thy salvation. Which Thou hast prepared before the people; to be a light to lighten the Gentiles, and to be the glory of Thy people Israel." A concise and able treatise, showing the literal fulfillment of the New Testament as well as the Old Testament predictions in regard to Israel (not Judah, or the Jews) as foretold by patriarchs and prophets, as set forth in the life and ministry of the Messiah, as indicated in the teachings and labors of the Apostles—as indicated by the predicted return of the Jews (Judah) to Palestine, in company with representative detachments of Ephraim and Manasseh—or in other words with representatives of England and America.

MOERIS—THE WONDER OF THE WORLD. By F. Cope Whitehouse, M. A., New York John Wiley & Sons. Fifteen pages.

A very interesting account of a great basin, to utilize to the utmost the annual overflow of the Nile, by converting a vast extent of low deserts into an impounding reservoir, to receive the overflow and distribute it for irrigation. This was regarded during the entire thousand years of Greco-Roman history as the most stupendous of the engineering works of the world. It

was not only of marvelous ability, but also planned on a scale of unique and incredible grandeur, and executed by the labors of successive generations. As a fitting monument of this immense undertaking, two pyramids were constructed on an island near the middle of the lake. Their summits rose 300 feet above its surface. Their base, however, lay 200 feet below the level of the Mediterranean and in nearly 50 fathoms of water. One-eighth of a mile high, they outranked all the other pyramids of Egypt, and were as far above the level of the bed of the lake as the present apex of Cheops is above the valley of the Nile. Such was the unanimous statement of antiquity from Herodotus to Hassam Ibn-Isaac, from B. C. 434 to A. D. 700—"It was situated 70 miles southwest of Memphis." "It was as Diodorus said, the most gigantic as well as the most unselfish creation of royal will, where successive monarchs had guided the energies and expended the resources of their subjects to the greatest advantage—considering the benefits and advantages brought (by this great work) to the government, none could sufficiently extol it. For seeing that the Nile never kept to a certain and constant height in its inundation, and the fruitfulness of the country ever depended on its just properties, the king dug this lake to receive such water as was superfluous, that it might neither immoderately overflow the land, and so cause fens and standing ponds, nor by flowing too little prejudice the fruits of the earth for want of water. To this end he cut a canal along the river into the lake eighty furlongs in length and 300 feet broad; into this he let the water of the river run, and at other times diverted it and turned it over the fields of the husbandmen, at seasonable times, by means of sluices, which he sometimes opened, and at other times shut up, not without great labor and cost (some \$50,000.)"

This lake continues to the benefit of Egypt to this day, and is now called the Lake of Myris, or Meris.

. THE RESTITUTION, issued weekly by the Christian Publishing Association, Plymouth, Indiana. Terms, two dollars per year, payable in advance.

'The Coming Age : Its Nature and Proximity.' Price \$3.00. Send to C. H. Jones, 77 Clark Street, Chicago, Ill.; to the Restitution, Plymouth, Ind.; or to J. P. Weethee, Millfield, Athens County, O.

'THE GOSPEL ACCORDING TO ST. MATTHEW.' Translated from the Greek text of Constantius De Tischendorf and other standard textual authorities. By Charles Gardner, M. A. Printed on extra heavy, tinted paper, elegant cloth binding. Post paid, only sixty cents. C. H. Jones, 77 Clark street, Chicago, Ill.

'The Number Counted 666, and the Name Counted 888.' By the Rev. James Upjohn. These books investigate the numerical value of names in the Hebrew Scriptures; they are companion volumes, price one dollar each. They will be sent postage paid by remitting the price to Rev. James A. Upjohn, Neenah, Wisconsin.

'The Waters Above the Firmament, or the Earth's Annular System.' Address Isaac N. Vail, Barnesville, Belmont county, Ohio.

The Messenger—A weekly journal devoted to the elucidation of prophecy and the identification of the British nation with the house of Israel, God's chosen people, his inheritance. Edited by Annis Unwin, 84 Oxford street, Sheffield, England, and published by John Heywood, 11 Paternoster buildings, London, E. C., England. Yearly subscription, 10s. 10d.

The Banner of Israel—A weekly paper advocating the identity. Edited by Philo Israel and printed by Robert Banks & Son, Racquet court, Fleet street, London, E. C., England. Annual subscription for one copy weekly, including twelve double numbers, post free, 7s. 6d.

Israel's Hope and Destiny—This magazine, which has been published for five years as a monthly, will henceforth appear as a quarterly. It advocates the identification of the Anglo-Saxon race with the house of Israel. The editor is Douglas A. Onslow, J. P.; publisher, Robert Banks, Racquet court, Fleet street, London, England.

RECEPITS FROM SUBSCRIBERS TO "THE INTERNATIONAL STANDARD" FROM MAY 19
TO JULY 19.

May 20th.—Lieut. W. L. Buck, \$2.00; S. A. Chaplin, \$2.00; Dr. G. W. Copeland, \$1.00; D. G. Lang, \$2.00; J. F. Ryder, \$2.00; J. E. Hilgard, \$2.00; Dr. W. J. Scott, \$2.00; Geo. P. Burwell, \$2.00; C. H. Strong, \$2.00; Henry Wick, \$2.00; Wm. Ritchie, \$2.00; P. S. Ross, \$2.00; Dr. F. M. Robertson, \$2.00; Lieut. Col. A. T. Frazer, \$3.43; F. W. Newman, \$2.00; Angust Mordecai, \$2.00; Chas. T. Seymour, \$2.00; H. H. Tibbals, \$2.00; Thos Wann, \$2.00; Mrs. E. Bedell Benjamin, \$2.00; Rev. M. L. Streater, \$2.00; R. Courtenay, \$2.38; Rev. J. H. Hopkins, \$2.00. Total \$46.81.

June.—G. W. Crosette, \$2.00; Dr. H. R. Hurd, \$2.00; M. D. Harter, \$2.00; G. W. Staples, \$2.00; Joseph D. Weeks, \$2.00; Justin Holland, \$2.00; Elgin Public Library, \$2.00; Thos. Basnett, \$3.00; San Francisco Public Library, \$2.00; Miss Mary D. Campbell, \$2.00; Hon. Wm. Bross, \$2.00; L. W. Perry, \$2.00; Henry Pierrepont, \$5.00; J. M. Walter, \$2.00; J. N. Ashburn, \$8.00; G. H. O'Donel, \$1.73; Ohio State Library, \$4.00; A. S. C. Wurtele, \$2.00; F. G. Roeder, \$2.00; H. Kellogg, \$10.00; Michael Kating, \$2.00; Wm. Hennesey, \$2.00; James Richardson, \$2.00; Peter Bowen, \$2.00; G. Lindenthal, \$2.00; M. J. McNarna, \$4.00; J. G. Chamberlain, \$2.00; George Thomas, \$2.00; James Durkee, \$2.00; Chas. Askew, \$1.00; G. H. Burrows, \$2.00. Total, \$82.73.

July.—Thos. Moore, \$2.00; Chas. E. Fogg, \$2.00; I. C. Brewer, \$2.00; J. M. Case, \$2.00; Jacob B. Clark, \$6.00; Free Library, Elizabeth, N. J., \$4.00; Dr. C. McManus, \$1.00. Total \$19.00.

Mr. F. A. R. Winter, of Demarara, British Guiana, writes us that we have made an error in our monthly receipts for March. Instead of F. A. R. Winter \$7.50, read, J. R. Bryden, \$4.00; R. J. Kelly, \$2.00; F. A. R. Winter, \$2.00, less commission on foreign bills, fifty cents.

